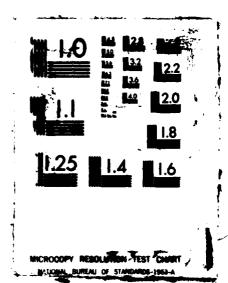
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20. ABSTRACT

This report presents the results of research conducted to supplement earlier field investigations in the Faulkner Lake Revetment Project area. Earlier investigations consisted of a pedestrian survey of the length of the project corridor and underwater magnetometer and sidescan sonar survey of the Mississippi River and Profit Island Chute. One historic site, the habitation area associated with Mount Pleasant Plantation (16EBR62), was located during these investigations. research included examination of archives and documents, historic maps, scholarly accounts, and oral informant interviews to gather information about the history of Mount Pleasant Plantation, historic land use within the project area, possible submerged resources within the project corridor, the age of abandoned courses of the Mississippi River in or near the project area, and the possible location of reported Pleistocene fossil outcrops. This research resulted in the tentative location of fossil flora and at least one lunette dating from the siege of Port Hudson (May-July 1863). While none of these resources lies within the area of planned construction, the possibility exists that submerged fossil flora may exist within the project corridor

19. KEY WORDS (continued)

Port Hudson Profit Island Quaternary Prairie Terrace Revetment Springfield Landing Thompson's Creek Tunica

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DEPARTMENT OF THE ARMY

NEW ORLEANS DISTRICT, CORPS OF ENGINEERS

P.O. BOX 60267

NEW ORLEANS, LOUISIANA 70160-0267

May 15, 1987

Planning Division **Environmental Analysis Branch**

To The Reader:

The following report was prepared for the U.S. Army Corps of Engineers, New Orleans District to assess and document previous investigations in the Faulkner Lake Revetment and Profit Island Chute project rights-of-way. This study investigates issues raised by previous research and assesses where and under what circumstances additional fieldwork is warranted.

No surface, subsurface or submerged cultural remains were located in the proposed project rights-of-way (Ranges D-172 to U-57+50). It has been determined that Mount Pleasant Plantation (16EBR62) is located outside the proposed construction limits. Because of extensive erosion, the site has been found to be ineligible for listing in the National Register of Historic Places. Remnant cypress stumps, believed to date from the Pleistocene epoch, have periodically been sighted in the river channel at the base of Mount Pleasant Bluff since 1791. If relocated, sampled and dated, these remnants have potential for clarifying the geomorphological history of the Mississippi River in this reach. Monitoring and sample collection are recommended, should the project ever extend upriver of Range U-57+50.

The State Historic Preservation Officer has reviewed this report and concurs with its conclusions. Construction of Faulkner Lake Revetment between Ranges D-172 to U-57+50 will proceed without further investigation.

Carroll H. Kleinhans

Authorized Representative of the

Contracting Officer

Cletis R. Wagahoff

Chief, Planning Division

PREFACE

R. Christopher Goodwin and Associates, Inc., would like to thank Ms. Carroll Kleinhans, the Contracting Officer's Representative, U.S. Army Corps of Engineers, New Orleans District who provided valuable assistance and guidance throughout the course of the project. Ms. Kleinhans wrote the scope of service for this study. Many individuals donated their personal time to answer our inquiries concerning Mount Pleasant, Port Hudson, and the bluffs. Mr. Fred Benton, Jr., of Baton Rouge, freely discussed his interests in the natural and social history of the Port Hudson area, which contains the Faulkner Lake Revetment Project. Benton provided copies of maps and pamphlets that were prepared by the Committee for the Preservation of the Port Hudson Battlefield and by the Bartram Trail Conference. Mr. William Spedale, of Baton Rouge, offered valuable information concerning Civil War activities and facilities in the area. Mr. Charles E. Hinton, of Gulf South Research Institute, also provided valuable information concerning the Civil War period. We would like to thank Dr. Whitney Autin and Ms. Joann Mossa, Louisiana Geological Survey, their valuable insights into the geological geomorphological complexities of the bluffs at Mount Pleasant. Dr. Richard H. Kesel, Department of Geography, Louisiana State University, and Dr. Paul Delcourt, Department of Geosciences, University of Tennessee, also provided information and opinions concerning the formation of the bluffs and the fossil-bearing deposits. Further information concerning the Civil War history of the region was provided by Dr. Larry Hewitt, Department of History, Southeastern Louisiana University. Ted Hokkannen, Planning Division, U.S. Army Corps of Engineers, New Orleans District provided information concerning the previous underwater cultural resources survey of the project area. Ms. Laura Ann Landry assisted in research into land tenure history at Mount Pleasant Plantation, and her research efforts formed the basis for reconstruction of the ownership history of that property. Finally, we would like to thank the staff of R. Christopher Goodwin and Associates, Inc., for their assistance in completing this project. Mr. David Poynter prepared the illustrations; Ms. Anita Cortes typed and produced this report.

TABLE OF CONTENTS

	CORPS LETTERiii
	PREFACEiv
	LIST OF FIGURESvii
I.	INTRODUCTION
	The Faulkner Lake Revetment Project
	Previous Investigations Within the Project Area3
	Research Problems Addressed in this Study7
II.	THE ENVIRONMENTAL SETTING
	Description of the Project Area9
	Geomorphic and Ecological
	Characterization of the Project Area9
III.	GEOMORPHIC CONSIDERATIONS11
•	Introduction11
	Development of the Bluff11
	Fossil-Bearing Deposits14
	Development and Age of Identified Channels19
IV.	THE CULTURAL SETTING23
	Prehistoric Culture Sequence23
	Prehistoric Resources near the Project Area27
	Historic Utilization of the Project Area28
	Historic Resources in or near the Project Area33
7.	MOUNT PLEASANT PLANTATION (16 EBR 62)34
	Land Tenure and Land-Use at Mount Pleasant34
	The French Colonial Period (1716-1763)
	The British Colonial Period (1763-1779)34
	The Spanish Colonial Period (1779-1810)
	The Antebellum Period (1810-1861)
	The Civil War (1861-1865)41
	The Postbellum Period (1866-1900)43
	The Modern Period (1900-Present)
	The Cain Cemetery44
7 I.	CIVIL WAR ACTIVITIES IN THE PROJECT AREA
-	Introduction
	The Fortifications of Port Hudson
	Activities Around Port Hudson
	Related Resources Expected in the Project Corridor 53
	- """" TO THE CONTRACT OF BANGELLEU III LIE FLUIMET COPPIGN "

VII.	SUMMARY AND RECOMMENDATIONS
	Cultural Resources Documented Within the
	Project Corridor58
	Prehistoric Resources
	Historic Resources58
	Potential Cultural Resources Within the
	Project Corridor62
	Prehistoric and Protohistoric Resources62
	Historic Resources63
	Submerged Resources63
	Geologic Resources64
	Recommendations64
	REFERENCES CITED
	Archival Sources73
	INDEX74

LIST OF FIGURES

Figure	1.	The Faulkner Lake Project area displayed on the U.S. Army Corps of Engineers right-of-way drawing2
Figure	2.	A composite of the USGS Port Hudson and Walls 7.5 minute quadrangles showing the project area4
Figure	3.	Plan view of 16 EBR 626
Figure	4.	Idealized cross-section of deposits in bluff at Mount Pleasant (after Autin et al. 1986)12
Figure	5.	Fossil cypress stumps at the Mount Pleasant bluff (from Bartram Trail Conference 1979:128c)
Figure	6.	Historic courses of the Mississippi River in the Faulkner Lake Project area (after Autin et al. 1986:27)
Figure	7.	Portion of the USGS Port Hudson 15 minute quadrangle showing the location of fossil outcrops (after Gunduz 1973:74)
Figure	8.	Courses of the Mississippi River in the Faulkner Lake Project area (after Fisk 1944)20
Figure	9.	Historic courses of the Mississippi River in the Faulkner Lake Project area (after Brunsden and Kesel 1973:580)22
Figure	10.	Map of Bartram's 1775 travels through Louisiana (from Bartram Trail Conference 1979:128b)30
Figure	11.	General Paine's headquarters at the Chambers' sugarhouse (from Harper's Weekly, July 11, 1863)31
Figure	12.	Plat of 1854 showing the original patents in the Faulkner Lake Project area. Patent filed June 19, 1854, Surveyor General's Office, Donaldsonville, Louisiana. (Map on file, Patent Records Section, East Baton Rouge Parish Courthouse)

Figure	13.	Plat of 1847 showing the landholdings including and adjacent to Mount Pleasant Plantation (Notary Book A2:136, East Baton Rouge Parish)39
Figure	14.	Confederate map of the Port Hudson area (from a portfolio compiled by the Committee for the Preservation of the Port Hudson Battlefield)42
Figure	15.	Portion of the USGS Port Hudson 15 minute quadrangle showing the location of Civil War entrenchments and fortifications around Port Hudson (after Gunduz 1973:76)48
Figure	16.	Bombardment of Port Hudson by Admiral Farragut's fleet, March 14-15, 1863 (from Harper's Weekly April 18, 1863). The Mount Pleasant Plantation is in the center of the picture with Faulkner Lake (not visible) to the right50
Figure	17.	The Lower Mississippi Fleet led by Admiral FarragutMarch 14-15U.S.S. Mississippi on fire and aground (from Leslie's Illustrated Newspaper)
Figure	18.	Houston and Hains' map of 1864 showing the location of Civil War fortifications around Port Hudson (from a portfolio compiled by the Committee for the Preservation of the Port Hudson Battlefield)
Figure	19.	Bombardments of Port Hudson by Admiral Farragut's fleet (from Leslie's Illustrated Newspaper, June 27, 1863). The project area would be in the right center of the picture54
Figure	20.	The bombardment of Port Hudson—the 100 lb. Parrot gun of the Richmond at work (from Harper's Weekly, July 18, 1863). The extreme northern end of the project right—of—way is visible at the right center edge of the picture55
Figure	21.	View of Springfield Landing (from Harper's Weekly, July 11, 1863). The view is northwest through Profit Island Chute. The project area would be in the left center of the picture at the upper end of the chute

Figure	22.	The location of identified resources near the Faulkner Lake Project area as shown on the U.S. Army Corps of Engineers right-of-way drawing59
Figure	23.	Composite of the USGS Port Hudson and Walls 7.5 minute quadrangles showing the location of identified resources near the Faulkner Lake Project area

CHAPTER I

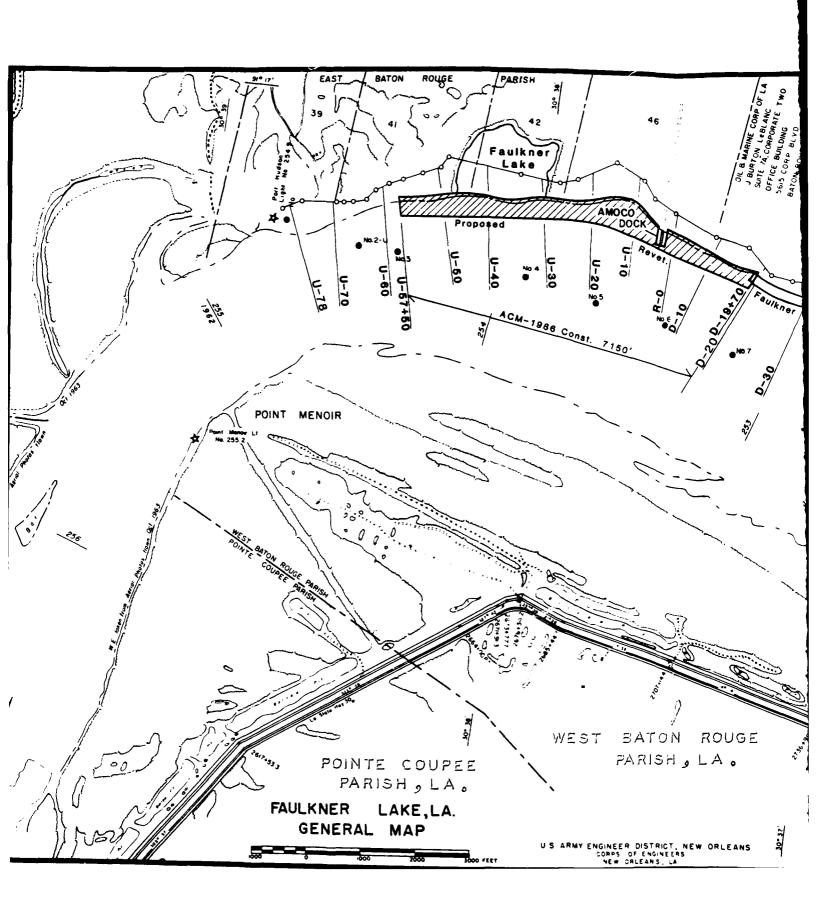
INTRODUCTION

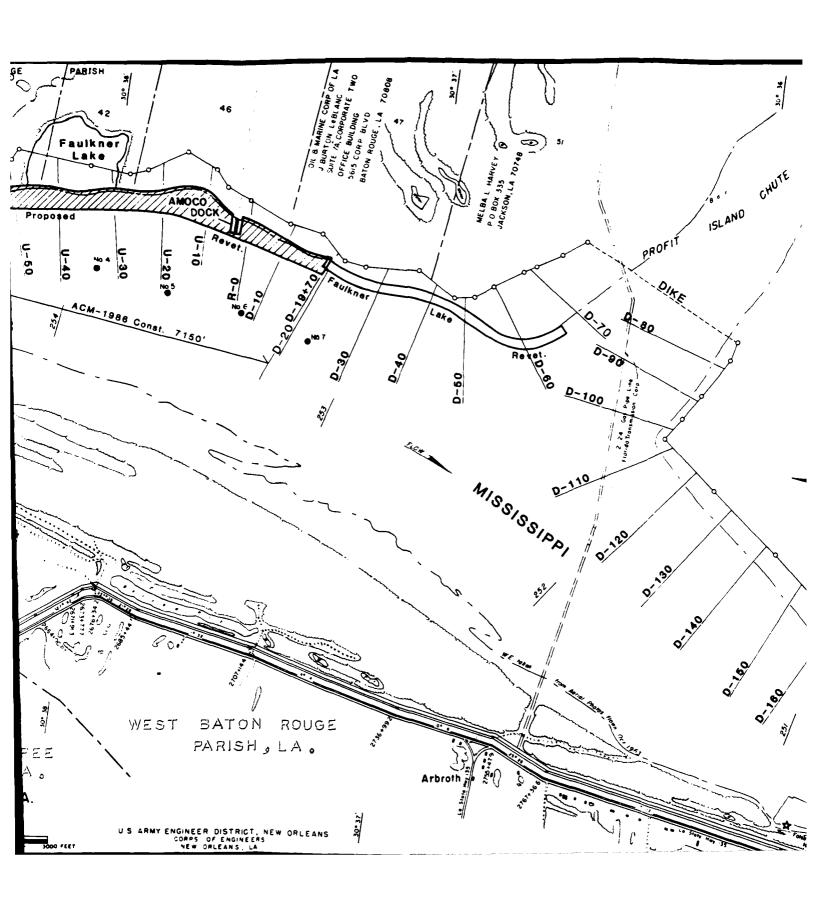
This study, undertaken pursuant to Contract Number DACW29-85-D-0113, Delivery Order 06 for the U.S. Army Corps of Engineers, New Orleans District, consisted of archival research and documentation of cultural resources in the Faulkner Lake Revetment project area. The objectives of this study were to define the potential for possible cultural resources from archival sources, and to establish the context in which to evaluate the significance of any resources within the project corridor. The research involved the examination and synthesis of published materials, unpublished manuscripts and papers, historical maps, and oral informant interview data. This information was gathered in an effort to supplement previous investigation of the project corridor.

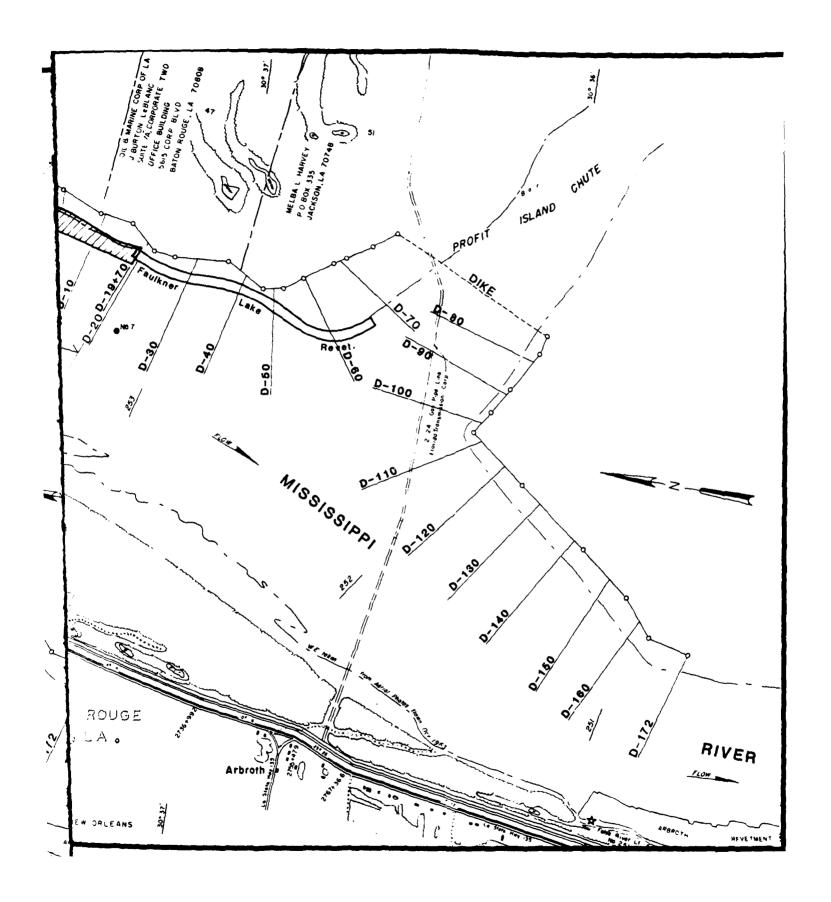
The Faulkner Lake Revetment Project

In an effort to restrict the flow of the Mississippi River through the Profit Island Chute, the U.S. Army Corps of Engineers, designed a low stone dike to cross the chute, and a revetment to curb erosion of the northern end of Profit Island and the adjacent east (left descending) bank of the Mississippi River. dike was constructed across the upper end of the Profit Island Chute during 1985. To prevent the undermining of the dike during the subsequent high water episode of that year, one segment of the revetment was constructed along the east bank of the Mississippi River adjacent to Profit Island and the Chute (Ranges D-70 to D-20) during 1985. The remainder of the revetment (across the tip of Profit Island and up the eastern bank of the Mississippi River to U-57 + 50) is scheduled for construction between 1986 and 1988. Although the project corridor extends as far north as the Port Hudson Light (Range U-78), revetment construction is not planned above Range U-57 + 50, the interface of the Pleistocene terrace with the Holocene floodplain. Any additional erosion control put in place above Range U-57 + 50 will require special design to accomodate the abrupt change in elevation above Faulkner Lake. The project corridor is illustrated in Figure 1.

Revetment construction involves the mechanical placement of a continuous, articulated concrete mattress extending from the low water line to a point several hundred feet into the river channel. Vegetation will be cleared from a corridor which extends from the low water reference plane to a maximum of 500 feet landward. Grading and clearing activities will result in the removal of portions of the present bankline for distances varying between 80







and 160 feet landward.

Between Ranges U-57 + 50 and U-52, a corridor approximately 120 feet wide, extending landward from the low water reference plane, will be cleared and graded. The revetment will tie in at the foot of the bluff between Ranges U-57 + 50 and U-48. Between Ranges U-52 and U-36, the grading corridor will expand to approximately 150 feet wide. From Range U-36 to U-22, the corridor will be approximately 80 feet wide. Between Ranges U-22 and U-9, the corridor will vary between 120 and 160 feet in This portion of the project corridor lies along a bend in the bankline, with the maximum width of the graded area extending landward from the apex of the bend. Between Ranges U-9 and U-1, the corridor will be approximately 120 feet wide. Because of a dock operated by Amoco, there will be a gap in construction between Ranges U-l and D-l. From Range D-l to the southern end of the construction area (Range D-20), the cleared and graded area will extend approximately 150 feet landward from the low water reference plane. This results in an average width of approximately 130 feet for the construction corridor. This cleared corridor then will be graded to a standard slope. These activities have the potential for impacts, due to the removal of trees and bankline grading, to any cultural resources within the construction zone.

Previous Investigations Within the Project Area

Two previous studies have been conducted in the Faulkner Lake Revetment Project area. These were investigations by the National Park Service, Denver Service Center (Shafer et al. 1984), and by the U.S. Army Corps of Engineers, New Orleans District. One historic site was identified during the Park Service survey.

The survey of the Faulkner Lake Revetment Project, conducted by the National Park Service in February, 1984, involved pedestrian examination of the maximum limits of the right-of-way of the entire project corridor (Ranges U-78 to D-167) (Figure 2). The project corridor was comprised of approximately 244 acres. Transect intervals varied from 25 to 100 feet (8 to 30 meters). Intervals were based on the perceived potential of an area to contain cultural resources, based on examination of historic maps and documents pertaining to the project area. Sufficient transects were traversed to cover the entire width of the project corridor. Inundated areas or highly disturbed areas were either not examined or they were given cursory examination. cutbanks within the project corridor were examined during the course of fieldwork. A survey of the river cutbanks also was conducted by boat. The boat provided access to Profit Island (Shafer et al. 1984:20-21).

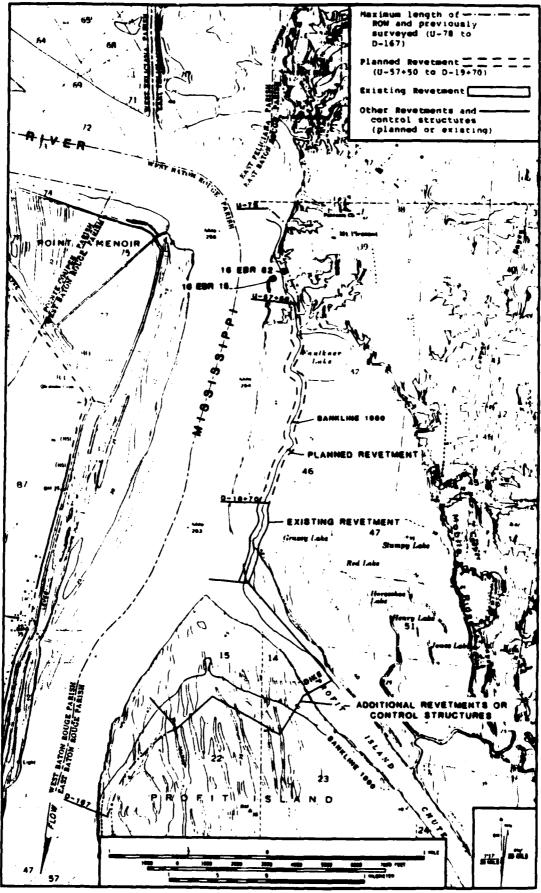


Figure 2. A composite of the USGS port Hudson and Walls 7.5 minute quadrangles showing the project area.

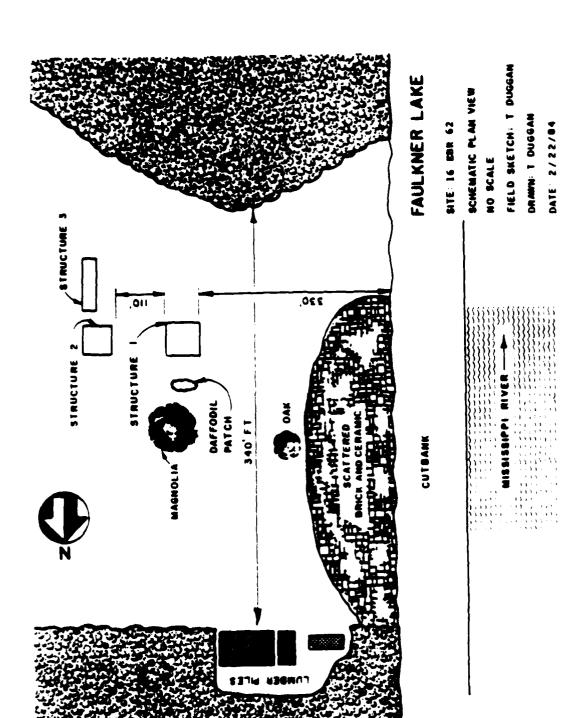
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The purpose of that investigation was to inventory and assess significant historic and prehistoric resources located within the project corridor. No standing structures or prehistoric sites were located within the construction zone. One historic site, Mount Pleasant Plantation (16 EBR 62), was identified between Ranges U-66 to U-68, just upriver from the end of the proposed reverment.

The Mount Pleasant Plantation Site (16 EBR 62), situated on the edge of Mount Pleasant bluff above the Mississippi River (Figure 2), is composed of a rubble scatter over an area measuring approximately 150 meters from north to south, by 50 meters east to west (Figure 3). The rubble consisted of four different types of modern and historic brick including: red modern; 8x4x2.5 inch brick, possibly hand molded, with sand temper; 6.5x4.25x3.25 inch red brick (possibly late 1700's hand pressed); and yellow "Acme Brick-Everlast" with limestone mortar. Other artifacts located include: a clear glass bottle top with an applied finished lip, porcelain insulation, two fragments of whiteware, a green glass bottle top with an applied lip, and three pieces of amethyst glass (Shafer et al. 1984:26). Limited subsurface testing failed to confirm the presence of intact subsurface cultural deposits. Further deep mechanical testing to provide conclusive information concerning the site's significance and integrity was recommended (Shafer et al. 1984:27). Shafer et al. (1984:27) correctly speculated that the site was associated with the Mount Pleasant Plantation. The site is located north of the northern limit of the planned construction area.

During a site visit to 16 EBR 62, conducted on September 30, 1986, one frame building was observed near the site area. Shafer et al. (1984) reported three frame buildings east or landward of the site. None were associated with the artifact scatter that defined 16 EBR 62. The relationship between the structure observed on September 30, 1986, and any of the three previously recorded structures was not discernible during the recent visit. Surface vegetation also prevented the corroboration of the boundaries of the artifact scatter at 16 EBR 62, as reported by Shafer et al. (1984). One agglomeration of brick, possibly representing a brick pier for a structure, was observed eroding from the present bluff face. This suggested that most of the artifacts at 16 EBR 62 were associated with a structure(s) that were destroyed by the slumping of the bluff.

An underwater cultural resources survey, using remote sensing, was carried out by the U.S. Army Corps of Engineers, New Orleans District, in May, 1985 (Ted Hokkannen, personal communication 1986). The portions of the project area on the northern end of Profit Island, within Profit Island Chute, and



Pigure 3. Plan view of 16 EBR 62.

along the adjacent east bank of the river were subjected to magnetometer and side scan sonar assays. Instrument readings were made along short transects within the project corridor. No historic or prehistoric sites were identified during these investigations within the project rights-of-way. However, a sunken barge was located downstream from the study area on the west side of Profit Island. It appeared to be modern derelict, possibly the remains of a U.S. Army Corps of Engineers work barge (Ted Hokkanen, personal communication 1986). No written report on this survey effort was produced.

Research Problems Addressed in this Study

The previous investigations within the project area failed to provide sufficient information to assess adequately the nature and significance of cultural resources located within the project corridor. They also did not define or describe the potential for additional and undocumented cultural resources which were not located during the field investigations. In addition, the level of historical documentation provided for the Mount Pleasant Plantation site (16 EBR 62) by Shafer et al. (1984) was insufficient to enable accurate characterization of its nature, extent, composition, or significance.

Unlike the earlier investigations, this study benefited from the specification of a series of research objectives defined through critical evaluation of the strengths and weaknesses of the earlier studies. As a result of that evaluation, the scope of services for this project delineated eight primary research concerns that needed to be addressed prior to making informed cultural resources management decisions. These were:

- Establish the location of a reported Pleistocene fossil bed eroding out of the bankline in the vicinity of Mount Pleasant landing.
- 2) Establish relative dates for the formation of Faulkner Lake and other oxbow lakes adjacent to the project easement.
- 3) Assess the potential for locating prehistoric and protohistoric sites on the natural levees of these relict channels.
- 4) Establish whether it is reasonable to assume that vessel wreckage may be found in these former channels.

- 5) Reconstruct channel changes in this vicinity over time and focus specifically on the location of the main channel during the Civil War.
- 6) Reconstruct the location of Civil War period ramparts in this vicinity (after Samuels et al. 1955).
- 7) Reconstruct changing land use and ownership at this locale during the historic period, to the present.
- 8) Reconstruct land use at Mount Pleasant Landing. Define the site, its size and changes in internal organization over time.

In this study, these concerns have been grouped into three general categories. These are: geomorphic considerations in the project area (encompassing research objectives 1 to 5 above); historic land-use of the project area, focusing on Mount Pleasant plantation (encompassing researach objectives 7 and 8 above); and, Civil War activities in the project area (encompassing research objectives 4 to 6 above). Particular discussions of these concerns are presented in Chapters III, V, and VI, respectively.

Archival, historic map, and secondary source research, as well as a series of oral informant interviews, were undertaken to recover the information necessary to address each of the above concerns. These data, and the interpretations resulting from them, were designed to enhance and augment the field investigations and limited historical research conducted by Shafer et al. (1984), as well as the underwater survey conducted by the New Orleans District. Finally, this report was designed to provide a synthesis of all existing data pertaining to the Faulkner Lake Revetment Project area, so that salient aspects of previous reports could be accessible to cultural resources managers under a single cover.

CHAPTER II

THE ENVIRONMENTAL SETTING

Description of the Project Area

The Faulkner Lake Revetment and Profit Island Chute Closure projects lie along the east (left descending) bank of the Mississippi River in East Baton Rouge Parish, Louisiana, approximately twenty river miles north of Baton Rouge. The lower (downstream and southern) end of the project area begins at approximately Mile 250.5 of the Mississippi River above Head of Passes. The project area extends upstream (northward) for approximately 4.5 river miles to mile 255 Above Head of Passes. At its southern end, the project area extends across the upper end of Profit Island Chute to the eastern bank of the river, approximately 1200 meters below the head of the chute; it continues northward (upstream) along the east bank to the approximate center of the bluffs in the vicinity of Mount Pleasant (Figure 2).

The majority of the project area lies on the alluvial floodplain of the modern Mississippi River. Elevations vary between 25 and 45 feet NGVD in this portion of the study area. On the east bank of the river, a number of oxbow lakes are present. The largest of these, Faulkner Lake (historically known as Lake Solitude), has been breached by the eastward migration of the modern Mississippi River channel. The proposed revetment will seal the remainder of Faulkner Lake from further lateral erosion. The lake is subjected to flooding by the Mississippi River during high water stages and is slowly being filled by associated siltation.

The northern portion of the project area (i.e., in Sections 39 and 41, T5S, R2W) lies along a high bluff on the east bank of the river. The bluff rises approximately 60 to 65 feet above the mean water level. Elevations on top of the bluff vary between 90 and 95 feet NGVD. The bluff provides a dramatic vista when viewed from the river or when the surrounding area is viewed from its crest. This scenic bluff, which provides an impressive geologic cross section, historically attracted many famous travellers and naturalists, including William Bartram and Charles Lyell (Bartram Trail Conference 1979; Lyell 1849).

Geomorphic and Ecological Characterization of the Project Area

The northern portion of the project area along the bluff, and the southern portions of the project area on the alluvial floodplain, represent two distinct geomorphic formations. The bluff represents Quaternary alluvial deposits identified by Saucier (1974:6) as Prairie Terrace. This terrace represents alluvial deposition by ancient Mississippi or Red River courses. It appears to be Sangamonian in age (ca. 70,000 to 100,000 B.P.). The lower portions of the project area represent Holocene deposition along by the modern Mississippi River. All of these recent alluvial materials are associated by Saucier (1974:21-22) with his Meander Belt 5, dating from approximately 2,800 B.P. to the present.

Differences in elevation and drainage are reflected in distinctive soil associations. On top of the bluffs, the soils comprise the Olivier-Calhoun-Loring association; the lower areas are covered by soils of the Sharkey-Mhoon-Crevasse association (United States Department of Agriculture 1968). The Olivier-Calhoun-Loring soils are moderately well drained loamy soils that predominate on flat upland areas in the region (United States Department of Agriculture 1968). The Sharkey-Mhoon Crevasse association soils are clayey to sandy, poorly to excessively drained, and subject to overflow (United States Department of Agriculture 1968).

These two zones display contrasting faunal and floral communities. The lower areas are presently covered by cypress (Taxodium distichum), willow (Salix nigra), and cottonwood (Populus deltoides) forests, with understories of wetland flora. The portions of the study area on top of the bluff are mostly cleared at present. Historically, however, this area was forested by a variety of trees. In 1775, William Bartram (1791:432) noted the presence of Magnolia, Liquidamber, Fagus, Quercus, Laurus, Morus, Juglans, Tilia, Halesia, Aesculus, Callicarpa, and Liriodendron. Most of these forested areas appear to have been cleared prior to the Civil War. By that time, the forests were dominated by Magnolia (Irwin 1892:164). More recent clearing has resulted in the domination of sweetgum (Liquidamber styraciflua) and water oak (Quercus nigra) (Gunduz 1973:55). Observations of the study area during a brief reconnaissance undertaken on September 30, 1986, revealed the presence of oaks and large pines along the gullies which dissect the bluff edge. The latter may have been commercial introductions during the early twentieth century. Several magnolias still remain in the Mount Pleasant area, as well.

CHAPTER III

GEOMORPHIC CONSIDERATIONS

Introduction

As briefly described above, the Faulkner Lake Revetment project area is composed of recent alluvial materials deposited within Holocene meander belts of the Mississippi River, and of older Quaternary deposits which were deposited both by the Pleistocene Mississippi River and by aeolian activities. Three factors contribute to the geological significance of these The bluff at Mount Pleasant is one of the few localities where the modern Mississippi River cuts into the older Quaternary terraces which underlie much of the region. This contact creates an exposure which is the best example of these deposits in Louisiana. The deposits also contain fossil stumps which may be quite ancient. These fossil-bearing deposits contain floral remains that are preserved without petrification. The third factor is the sequence of channels which exist in the recent alluvial portions of the project corridor. These channels were responsible for the formation of Faulkner Lake and of other smaller oxbow cut-offs evident along the east bank of the river, both north and east of Profit Island Chute.

Development of the Bluff

The bluff within the project corridor represents a portion of an early river terrace identified by Autin et al. (1986:25) as Quaternary Prairie Terrace (cf., Saucier 1974:6). Both Autin and Saucier associate the materials that comprise this terrace with the Sangamonian Interglacial Period (ca. 70,000 to 100,000 B.P.). Similarly, Delcourt and Delcourt (1977:221) describe this terrace as fluvial deposits from an ancient Thompson Creek and from the Mississippi River. According to the Delcourts, the river terrace represents coastwise trending deposits, while the the Thompson Creek terrace parallels the modern river. Delcourt and Delcourt (1977) describe these overlapping deposits as "terrace 2," and assign them to the Sangamonian Period.

Autin et al. (1986:31-32) have provided a summary of the geologic cross section observed in the profile of the bluff at Mount Pleasant. That description employs a combination of depositional environments and textures to distinguish stratigraphic units. Figure 4 provides a graphic summary of an idealized cross-section of the bluff.

The top of the bluff is covered by soils identified as Memphis

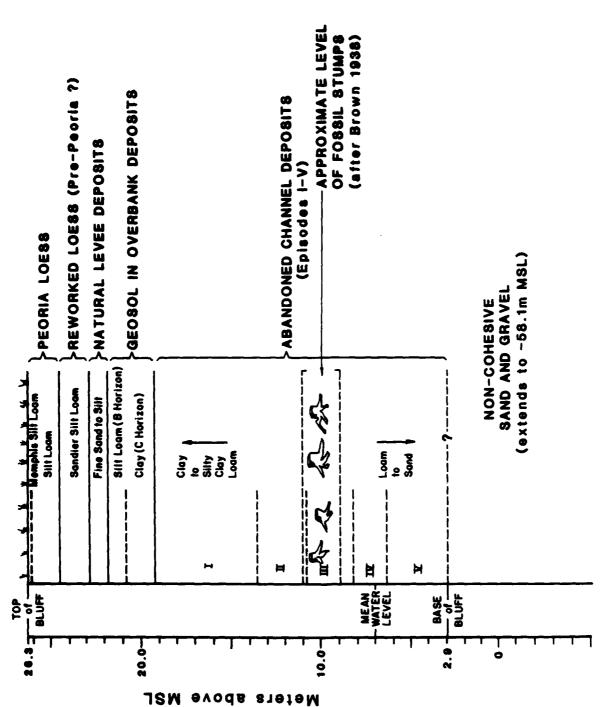


Figure 4. Idealized cross-section of deposits in bluff at Mount Pleasant (after Autin et al. 1986).

silt loams. These soils developed in situ from the underlying loess deposits (Autin et al. 1986:25). They are well-drained and moderately permeable (United States Department of Agriculture 1968). The underlying material from which the soils developed is identified as Peoria loess. This material represents aeolian deposition at the end of the last advance of the Wisconsinan Glacial Period (ca. 12,000 to 20,000 B.P.). Remnants display features such as cracks, clay skins, and oxide stains which are related to the normal pedogenic processes active in the region (Autin et al. 1986:28). This stratigraphic unit, including the fully developed soils, extends to a depth of 1.8 meters below the present ground surface.

The next stratigraphic unit in the bluff is described as reworked loess. It contains more sand than the overlying deposits. Whether this material is coeval with the overlying Peoria loess or dates from an earlier Wisconsinan advance is unknown. This material may represent the erosion of earlier loess deposits from higher Intermediate Terraces onto the Prairie Terrace. This unit extends from 1.8 to 3.45 meters below the ground surface (Autin et al. 1986:28).

Extending from 3.45 to 4.45 meters below the ground surface are materials interpretted as natural levee deposits. This unit contains fine sand to silt size particles. A number of sedimentary structures have been identified in these fluvial deposits (Autin et al. 1986:29).

Below the natural levee deposits is a geosol. This unit extends from 4.45 to 7.05 meters below the ground surface. It contains a silt loam B horizon over a clay C horizon. Calcium carbonate nodules occur within the lower C horizon (Autin et al. 1986:29).

Underlying all of these deposits is a series of five abandoned channel deposits. Materials within each of these sub-units grade from fine (clay to silty clay loam) to coarse (loam to sand) with depth. In addition, the relative grain size of the deposits generally increases with depth throughout the entire unit. Abandoned channel deposits extend from 7.05 to 23.35 meters below the ground surface (Autin et al. 1986:29). These deposits are present at the base of the bluff, and extend below the mean water level of the Mississippi River (ca. 7.0 meters AMSL, after Kesel et al. 1974:463).

Underlying the bluff, and all of the aforementioned stratigraphic units, are a series of non-cohesive sand and gravel deposits which extend to at least 58.1 meters. These deposits have been identified through a series of boreholes excavated by the U.S. Army Corps of Engineers, New Orleans District, since 1962

(Brunsden and Kesel 1973:579). The locations of these boreholes are displayed in Figure 1. Thus, the bluff contains a series of aeolian, possibly colluvial, and alluvial materials. All were deposited since 100,000 B.P.

The bluff at Mount Pleasant is actively eroding into the Mississippi River. Continued slumping of the bluff occurs as the river erodes a scour pool in its thalweg. This leads to the oversteepening of the toe of the bluff. Eventually, this promotes bank failure beneath the waterline, and concomitant slumping of the overlying material. This degradation is accelerated by periods of high water which saturate the bluff deposits (Kesel et al. 1974:463).

The proximity of the river to the Prairie Terrace at this locale, and the active erosion of the bluff, have created the finest exposure of alluvial materials in Louisiana (Joann Mossa, personal communication 1986). As a result, these bluffs have attracted comment and prompted observation by noted naturalists since the eighteenth century. The bluffs are currently the site of geological and geomorphological research concerning the materials that compose the bluffs and their formation and evolution (Autin et al. 1986; Brunsden and Kesel 1973; Kesel and Baumann 1981; Kesel et al. 1974).

Possil-Bearing Deposits

Since the earliest description of the bluffs along the Mississippi River near Port Hudson, naturalists have noted the presence of fossil trees along the base of the bluff. The fossils are preserved stumps and limbs of trees which appear to have occupied a river floodplain prior to burial. Erosion by the river along the bluff exposes these fossils at periods of extreme low water. Figure 5 shows these stumps as observed by Clair Brown, Department of Geology, Louisiana State University.

Early observers including Bartram (1791), Carpenter (1838), Hilgard (1869), and Lyell (1849), visited fossil bearing outcrops above the town of Port Hudson. In general, later researchers at the Mount Pleasant bluff were unable to observe fossil timbers (Autin et al. 1985; Brunsden and Kesel 1973; Delcourt and Delcourt 1977). Clair Brown (1938) is the only modern geologist who has observed these fossils, although the distinguished amateur naturalist Fred Benton of Baton Rouge (personal communication 1986) observed fossil flora about a decade ago near the location recorded by Brown (1938). Figure 6 displays the historic river channels in the area, and the approximate location of the visits by naturalists or geologists to the bluffs. Figure 7 displays the location of the fossil outcrops identified by Gunduz (1973:74).

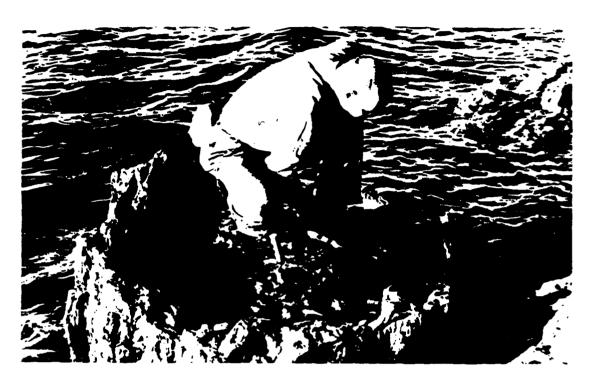
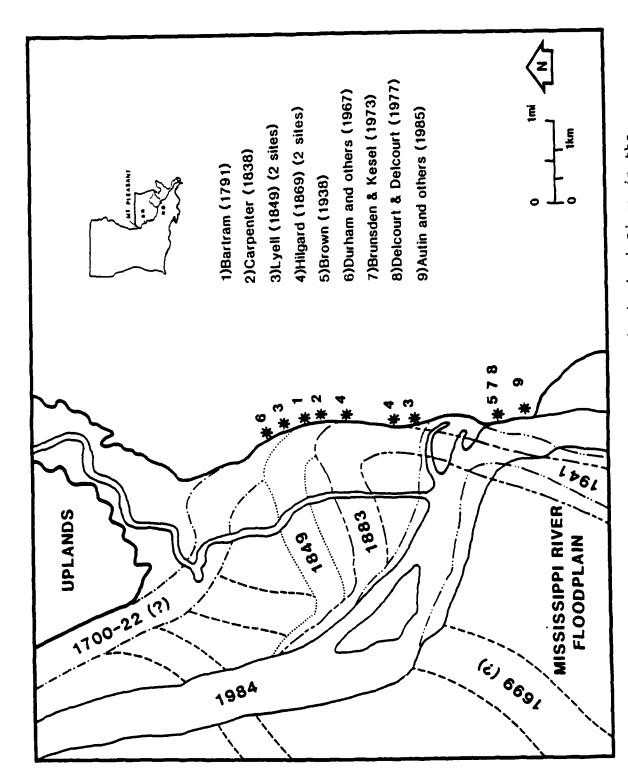
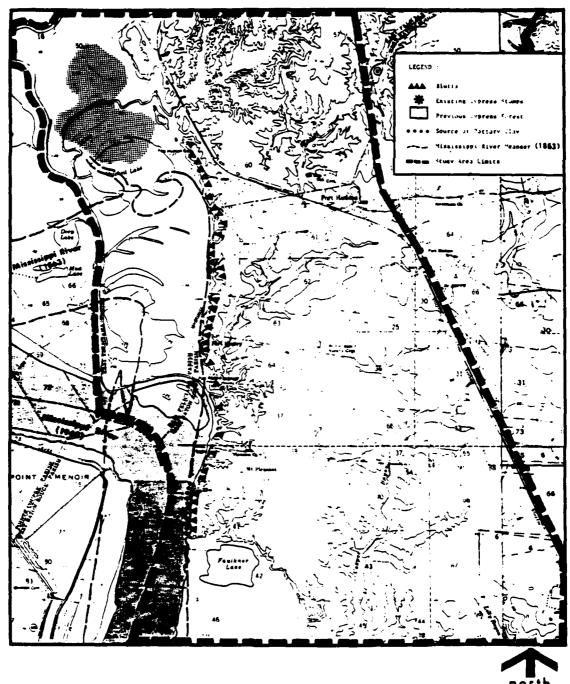


Figure 5. Fossil cypress stumps at the Mount Pleasant bluff (from Bartram Trail Conference 1979:128c).



Historic courses of the Mississippi River in the Faulkner Lake Project area (after Autin et al. 1986:27). Figure 6.





Portion of the USGS Port Hudson 15 minute quadrangle showing the location of fossil outcrops (after Gunduz 1973:74).

The latter author, however, appears to have extrapolated the location of the fossil outcrop in question from Brown's (1938) earlier work. During a site visit to the Faulkner Lake Revetment Project area on September 30, 1986, when the river was low (3.5 feet at the Carrollton Gauge), no fossil flora could be relocated.

Brown (1938:61) identified 32 stumps along a section of the Mount Pleasant bluff approximately 800 meters long. Thirty-one of these stumps were identified as cypress (Taxodium distichum); one was tupelo gum (Nyssa aquatica). Carpenter (1838) also identified water oak (Quercus nigra), swamp hickory (Carya aquatica), cottonwood (Populus deltoides), and sweetgum (Liquidamber styraciflua) in similar outcrops above Port Hudson. All of these species represent inhabitants of the floodplains of the modern rivers of the region.

The age of these fossil floral materials is unknown. Gunduz (1973:11) reports a radiocarbon assay, purportedly conducted by Brown, of 12,500 B.P. for samples collected from one of the fossil stumps. This date is not congruent with the stratigraphic position of the fossil-bearing deposits. Brown (1938) reported locating the fossil stumps between nine and eleven meters above MSL. This approximate level is indicated in the idealized profile shown in Figure 4. The surrounding alluvial materials represent a significantly older period of deposition than the radiocarbon date. This suggests either that the stumps are not in their primary context (i.e., they represent driftwood which has become embedded in the Quaternary deposits), or that the radiocarbon assay is in error (Paul Delcourt, personal communication 1986). The recorded historic presence of analogous deposits near Port Hudson argues in favor of the latter hypothesis.

Thus, the last reliable reports of fossil floral outcrops in or adjacent to the Faulkner Lake Revetment project area are a decade old; the last written eyewitness account of this phenomenon is nearly fifty years old. These reports, however, could not be verified during 1986. While the identified location of the fossil outcrops (Brown 1938) is within the project corridor, that location, in the vicinity of Range U-78, is well above the northern limits of planned construction activities.

Nevertheless, construction and grading activities further downstream along the bluff could expose or impact other analogous and buried fossil-bearing deposits of similar age and stratigraphic position. However, such deposits are not unique to this location. Similar outcrops have been observed upstream from the project area, above Fancy Point Towhead (Fred Benton, personal communication 1986). Brown (1938), and Delcourt and Delcourt (1977), also collected fossil flora from a number of localities on Bayou Sara. It should be noted, however, that Delcourt and

Delcourt (1977) associate these materials with their "terrace 1" unit, which postdates significantly the "terrace 2" deposits at Mount Pleasant bluff.

Development and Age of Identified Channels

Numerous authors have attempted to delineate the abandoned courses of the Mississippi River evident near the bluffs at Mount Pleasant. The earliest such efforts were those of Fisk (1944), who identified prehistoric and historic courses of the river using existing maps and aerial photographs. Figure 8 displays the courses identified by Fisk (1944) in or near the project area. Fisk was able to date some of these courses using historic map data. Courses older than ca. 1700 could not be adequately assigned an age. Their relative ages are reflected in their positions; in Figure 8, the relative ages are indicated by decreasing numerical order.

Examination of Fisk's (1944) map (Figure 8) reveals that Holocene alluvial materials south of the bluffs were deposited prior to 1700. The earliest deposits in this area occur at Faulkner Lake (Course 11). In general, these deposits decrease in age as one moves downstream. Thus, the oxbows Grassy Lake, Stumpy Lake, and Red Lake, which are located downriver from Faulkner Lake (Figure 2), postdate Faulkner Lake. Horseshoe Lake, Jones Lake, and Henry Lake (Figure 2) are even more recent. As Figure 8 illustrates, each of these six oxbows can be associated with one of the courses of the Mississippi River identified by Fisk (1944).

As a heuristic exercise, documented rates of river migration can be used as a basis for extrapolating hypothetical ages for the undated channels identified by Fisk (1944). Such an exercise requires the adoption of a constant as an estimator of the rate of river movement; sixty years has been selected for this estimator, since each of the dated courses (Courses 16 to 20) represents approximately 60 years of occupation by the river. If this model has any veracity, Course 11, which contains Faulkner Lake, would date from approximately A.D. 1300. The downriver courses associated with the six oxbow lakes noted above would represent channel migration during the next 120 years (to ca. 1420). Even if the estimator is inaccurate, it is clear that none of the alluvial materials in the project corridor south of the Mount Pleasant bluff was deposited prior to A.D. 1700. This implies that no historic vessels or other submerged historic cultural resources will exist within these deposits except as redeposited material laid down during periods of flooding.

However, this area has the potential to contain prehistoric sites. These sites would represent resource procurement loci for

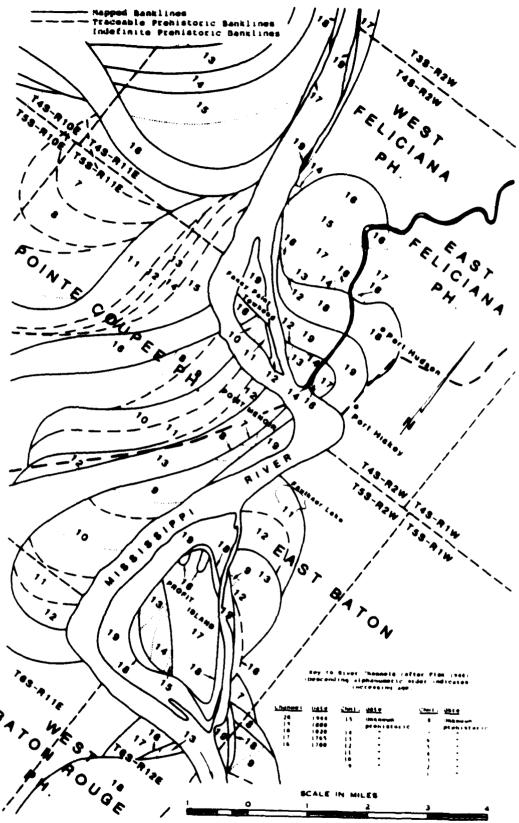


Figure 8. Courses of the Mississippi River in the Faulkner Lake Project area (after Fisk 1944).

the acquisition of fauna and flora available within the oxbows and backswamps of this area. Most such sites would be fairly small, with low artifact densities reflecting subsistence activities (Hemmings 1981; Poplin et al. 1987; Weinstein and Kelley 1984).

Examination of the age of the courses which built Profit Island suggests that most of this feature was deposited in the very recent past. Course 13 is the earliest identified river channel on the island. Given the age estimates defined above, this suggests that the island was created after ca. A.D. 1420. size and shape have fluctuated greatly, as evidenced by the large number of courses which can be identified on the island. Prehistoric sites deriving from the latest prehistoric periods, or from the protohistoric period, may be present on the island, albeit such remains would be deeply buried. In addition, there is a potential for vessel wreckage given the relatively young age of the island. The potential for any such resources to survive the constant reworking of the island, however, is minimal. It is interesting to note that the only identified vessel discovered during the 1985 underwater remote sensing surveys in the vicinity of Profit Island constituted a modern barge (Ted Hokkannen, personal communication 1986).

The location of the historic courses of the river through the project area also has been mapped by Brunsden and Kesel (1973), and by Autin et al. (1986). Their interpretations are shown in Figures 6 and 9. Using these data, it is possible to observe the southern and eastern migration of the Mississippi River channel. This historic movement to the east, at a rate of approximately 18 meters per year (Kesel and Baumann 1981:70), probably has destroyed or perturbed any cultural resources that may have existed within the Faulkner Lake Revetment project corridor, due to the combined action of erosion and bank failure.

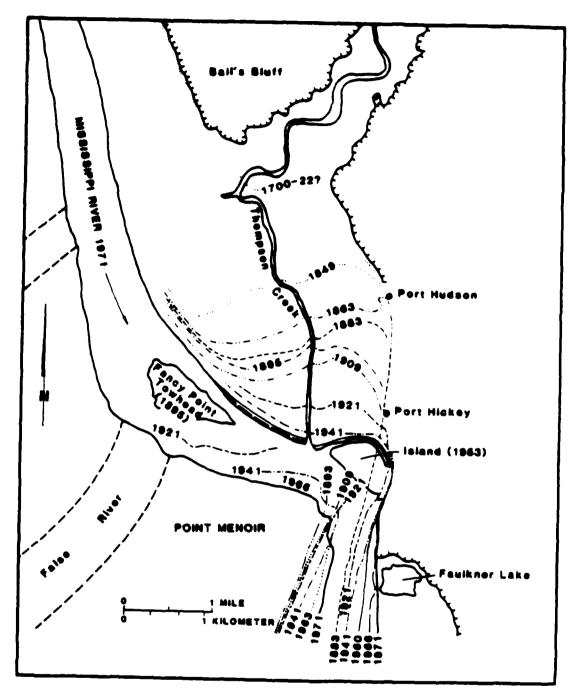


Figure 9. Historic courses of the Mississippi River in the Faulkner Lake Project area (after Brunsden and Kesel 1973:580).

CHAPTER IV

THE CULTURAL SETTING

Prehistoric Culture Sequence

The earliest well defined archeological evidence of human habitation in North America is represented by the Paleo-Indian stage. A date range of 10,000 - 6,000 B.C. has been suggested for Paleo-Indian occupation of the Lower Mississippi River alluvial valley (Brain 1971:3). Archeological evidence from the western United States indicates that Paleo-Indians were semi-nomadic big game hunters. The material culture of the Paleo-Indian period is best exemplified by the manufacture of large, thin, bifacially-worked lanceolate projectile points which had a "fluted" or channel flake scar at their base. Fluted point complexes include the Llano, Clovis, Folsom, and Plano traditions.

The subsequent Archaic stage reflects cultural adaptations to climatological change occurring after the retreat of the last Pleistocene glaciation (approximately 8,000 B.C.). Critical environmental changes may have influenced human adaptation during the Archaic period. Bryant et al. (1982:21-22), synthesizing a number of articles, has summarized these changes as follows:

- 1. The extinction, without replacement, of much of the Pleistocene megafauna, including the elephant, horse, and camel, and most of the Bison species on which the Lithic stage economy had been largely based (Martin and Wright 1967; Butzer 1971; Dreimanis 1968:257).
- 2. Certain fluctuations in rainfall and temperature as yet only partly understood but presumed to relate to worldwide climatic changes and to be generally correlated with glacial retreat and oscillations (cf., Antevs 1948; Martin et al. 1961; Denton and Karlen 1973; Denton and Porter 1967).
- 3. The plant and animal recolonization of the areas of North America which were previously glaciated, and establishment of the modern geographical position of the major North American lifezones...(Hunt 1974:149-158; Butzer 1971; Cleland 1966:20-22; King and Allen 1977; Saucier 1977:42; Stoltman 1978:714; Whitehead 1965; Wright 1974:10-11, 1975).

4. The changing volume and gradient of river systems draining eastern North America generated by worldwide deglaciation and rising sea levels (Bloom 1971; Emery and Edwards 1966; Turnbaugh 1975:58-60).

Archaic cultural complexes are represented by localized stone tool traditions which are thought to represent regional adaptations to local environmental conditions (Bryant et al. 1982:22). Projectile point types found in early Archaic sites include San Patrice, Meserve and Dalton. A shift towards exploitation of smaller and more varied game occurred, along with an increase in gathering of plants and previously ignored animal species, such as shellfish. Archaic subsistence patterns increasingly became more efficient with technological advances which included ground stone tools, such as adzes and metates, and the use of the atlatl (spear thrower). Common point types for the Middle Archaic are Big Sandy, Keithville, Yarbrough, Evans, and Carrollton. A gradual settlement pattern shift from semi-nomadic to seasonal site occupancy to semi-permanent settlement is evidenced during the Archaic. However, in Louisiana, no intact archeological remains firmly associated with the Archaic period have been systematically investigated (Neuman 1984).

The appearance of earthwork and burial mound construction in the Late Archaic marked the appearance of the Poverty Point culture in Louisiana, circa 1,500 B.C. Considered to be either an Archaic-Formative transition or an Archaic climax phenomenon, the Poverty Point Site, located in West Carroll Parish, is unique in North American prehistory. Although small quantities of fibertempered pottery are present at the Poverty Point Site, some scholars argue that the culture was aceramic. Crude pottery figurines and irregular-shaped fired clay objects, possibly used in "stone boiling" cooking techniques, occur in Poverty Point contexts (Ford and Webb 1956). Poverty Point material culture also is represented by fine stone lapidary work, steatite or soapstone vessels, and by a microlithic tool industry. Subsistence appears to have been based on intensive hunting and gathering, although prior emphasis on protein capture may reflect a bias in archeological studies of the Poverty Point period. Projectile point types originating in the Late Archaic and continuing into the Poverty Point period are Gary, Ellis, Pontchartrain, Kent, Carrollton, and Marshall, and larger forms such as Hale (Webb 1968).

The next stage in the chronological sequence for the region is called the Neo-Indian era. Changes in settlement patterns from semi-permanent to permanent villages, and the introduction of agriculture and ceramics, characterize post-Archaic periods. The most frequently applied regional chronology divides the Neo-

Indian era in South Louisiana into a number of periods.

The first of these periods is the Tchula or Tchefuncte, which has been dated from ca. 100 - 500 B.C. (Ford and Quimby 1945; Shenkel 1981). During the Tchefuncte period, pottery became important in prehistoric Louisiana, and increasing amounts of pottery with rocker stamped decoration and with tetrapodal supports were made. The soft Tchefuncte pottery had poorly compacted paste, and common vessel forms included bowls and cylindrical and shouldered jars. Decoration also included fingernail and tool punctation, incision, simple stamping, drag and jab, parallel and zoned banding, and stippled triangles.

The Tchefuncte artifact assemblage includes boatstones, grooved plummets, mortars, sandstone saws, barweights, scrapers, and chipped celts. Socketed antler points, bone awls and fish hooks, and bone ornaments also have been found. Projectile point types found in Tchefuncte contexts are Gary, Ellis, Delhi, Motley, Pontchartrain, Macon, and Epps. The population of the Tchefuncte period appears to have been a melange of long-headed Archaic peoples with a new subpopulation of broad-headed people who practiced cranial deformation, and who are thought to have entered the southeast from Mexico. The presence of rocker stamped pottery, burial mounds, and of some other individual traits, also shows similarities to the Hopewellian development (500 B.C. to A.D. 300) (Ford and Quimby 1945; Shenkel 1984).

The subsequent Marksville period (100 B.C. - A.D. 300) to a large degree is a localized hybrid manifestation of the Hopewellian culture climax that preceded it in the Midwest. The type site is located at Marksville, Louisiana. Elsewhere in the state, smaller sites occur which display both Marksville pottery types and a modified form of the Marksville mortuary complex. Marksville houses appear to have been circular, fairly permanent, and possibly earth covered. The economic base of the Marksville culture seems to be a further modification of the Poverty Point -Tchefuncte continuum, albeit prior emphasis on the importance of hunting, fishing, and gathering aspects of subsistence in relation to agriculture may have been overstated. A fairly high level of social organization is indicated by the construction of geometric earthworks and of burial mounds for the elite, as well as by a unique mortuary ritual system. Although large quantities of burial furniture are not typically recovered from Marksville sites, some items, particularly elaborately decorated ceramics, were manufactured especially for inclusion in burials (Shenkel 1984; Toth 1974).

Marksville ceramics were well-made, with decorations that included u-stamped incised lines, zoned dentate stamping, zoned rocker stamping (both plain and dentate), the raptorial bird

motif, and, flower-like designs. The cross-hatched rim is particularly characteristic of Marksville pottery, and may relate this complex to other early cultural climaxes in the Circum-Caribbean area. Plain utilitarian wares also were produced. Perforated pearl beads, bracelets, and celts have been recovered from Marksville contexts (Toth 1974, 1977).

The next cultural period identified for south Louisiana is the Troyville or Baytown phase (A.D. 300 - 700). This transitional period followed the decline of the Hopewellian Marksville culture; it is poorly understood. Except for the type site at Jonesville (16 CT 7), knowledge of the Troyville culture is based on the discovery of Troyville ceramics in other sites. Among the pottery types clustering in the Troyville period are: Mulberry Creek Cord Marked, Marksville Incised (Yokena), Churupa Punctated, Troyville Stamped, Larto Red Filmed, Landon Red-on Buff, and Woodville Red Filmed. However, these pottery types and most other traits are not confined solely to this period. Troyville is thought to represent the period when maize agriculture and the bow and arrow were adopted. Evidence for agriculture includes shell hoes and grinding stones (Phillips 1970).

The subsequent Coles Creek period (A.D. 700 - 1200) developed out of Troyville. Coles Creek was a dynamic and widespread manifestation throughout the Lower Mississippi Valley. Coles Creek may be viewed as the local early or pre-classic variant of the Mississippian tradition, and its emphasis on temple mound and plaza construction again suggests Mesoamerican influence. Population growth and a real expansion were made possible by increasing reliance on productive maize agriculture. The seasonal exploitation of coastal areas supplemented the maize economy of large inland sites, and small non-mound farmsteads were present. A stratified social organization with a dominant priestly social class continued. The construction of platform mounds became important during this period. These were intended primarily as bases for temples or other buildings, but some also contained burials. Rounded smaller mounds still were present. A common motif of Coles Creek ceramics is a series of incised lines parallel to the rim. Pottery types include: Coles Creek Incised, Pontchartrain Check Stamped, and Mazique Incised (Collins 1932; Phillips 1970).

In the southern part of the Lower Mississippi Valley, the Plaquemine culture developed out of a Coles Creek background. Ceremonial sites of this period consisted of several mounds arranged about a plaza area. Associated small sites were dispersed about such centers. Social organization and maize agriculture were highly developed. The most widespread decorated ceramic type of the Plaquemine period was Plaquemine Brushed.

Other types include Harrison Bayou Incised, Hardy Incised, L'Eau Noir Incised, Manchac Incised, Mazique Incised, Leland Incised, and Evansville Punctate. Both decorated types and plain wares, such as Anna Burnished Plain and Addis Plain, were well made. Diagnostic Plaquemine projectile points are small and stemmed with incurved sides (Neuman 1984).

Late in the prehistoric period, the indigenous Plaquemine culture came under the influence of Mississippian cultures from the Middle Mississippi River Valley. Mississippian culture was characterized by large mound groups, a widespread distribution of sites, and by shell tempered pottery. A distinctive mortuary cult or complex, called "Southern Cult," that made use of copper, stone, shell, and mica was introduced, and elaborate ceremonialism reflected in animal motifs and deities pervaded Mississippian culture. Trade networks were well established during this period, and raw materials and specialty objects were traded across large areas of the central and southern United States (Neuman 1984).

One prehistoric site (16 EBR 15) was identified in the project area during this investigation. The site consists of a single stone chopping tool recovered from the base of the bluff. No other cultural material was associated with this isolated find. Generally, very few prehistoric sites have been documented in the vicinity of this project area. Historically, the Houma Indians occupied areas along the Mississippi River in the vicinity of the project area (Giardino 1984). The Plains area, east of the project corridor, was traditionally the hunting grounds of the Muskhogee Indian group, to which the Houma belonged (Jennings 1962). The Houma initially were encountered by LaSalle and Tonti in 1682-85 near the Red River. Iberville is documented as having reached the Houma village, located on the Louisiana/Mississippi border, in 1699. Under pressure from the Tunica, the Houma left the area, and in 1709 their primary settlement was located in Ascension Parish (Giardino 1984).

Prehistoric Resources near the Project Area

Only three prehistoric sites have been discovered within approximately four miles of the project corridor. One site is located in East Baton Rouge Parish; two sites are located in East Feliciana Parish. Site 16 EBR 15 is a spot find consisting of a single crude stone chopping tool. This tool was discovered in slumped material at the base of the bluff in the NW 1/4 of the NW 1/4, Section 41, T5S, R2W, or near Range U-70, by Dr. William Haag. The original stratigraphic context of the chopper could not be determined at the time of discovery.

The Pears Site (16 EF 52) contains components deriving from the Plaquemine and Natchezan (protohistoric) periods of occupation. The Foster Creek Site (16 EF 16) contains a Plaquemines period component. No other prehistoric sites are known in or near the project area.

Historic Utilization of the Project Area

The earliest documented historic occupations within the region containing the Faulkner Lake Revetment project area date early eighteenth century. In 1717, Bienville established the Post of Pointe Coupee eleven miles upriver from the Faulkner Lake project area, on the right descending bank of the Mississippi River. That fort included barracks, warehouses, and a jail (Curet 1969:2). Shortly thereafter, the French crown began concessions to colonists and to prominent French citizens. French colonial census of 1722 (Maduell 1972:28) listed ten men, five women, and two children resident in the entire Baton Rouge area. At that time, the inhabitants of the large concession at Baton Rouge owned by Bernard Diron Dartaguette were cultivating rice and vegetables (Meyers 1975:12). That concession was abandoned by 1727, due to disease, Indian warfare, and a shortage of supplies.

During the remaining French colonial occupation of the region (i.e, until 1763), the area around Faulkner Lake was used primarily as hunting reserves and farmlands. Early French travelers through the area described extensive herds of buffalo along Thompson's Creek and in the prairies, or St. John's Plains, behind the bluff (Jennings 1962:4-7). While no specific information concerning the Faulkner Lake area during this period was discovered, Pittman (1906:74), after observing the area in 1770, stated that:

...the inhabitants [the French colonists] cultivated maize and other provisions on the east side of the river, but after the peace (1763)... removed to the west side (of the river).

Therefore, any French landholdings developed in the project area are assumed to have comprised small farms which produced subsistence foodstuffs, rather than plantations which produced commercial agricultural products.

Following the acquisition of the West Florida Parishes by the British in 1763, serious efforts to establish large agricultural landholdings were undertaken. Large grants of land were given to a number of wealthy English settlers in and near the project area.

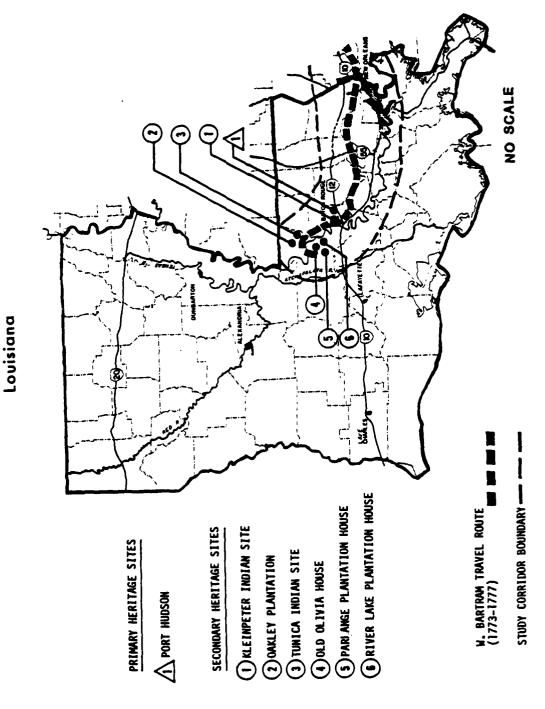
These included Governor Montfort Browne (17,000 acres), Governor George Johnstone (10,000 acres), Thomas Ackens, Israel Matthews (355.92 acres), and John Marks. William Bartram (1791:434), in his travels through the area in 1775, recounted seeing the same crops along the Mississippi River that he had seen in the Carolinas, namely corn, cotton, rice, and indigo. Figure 10 is a map of Bartram's travels through Louisiana.

English plans for the area also involved the establishment of a territorial capitol at or near Port Hudson. While plans were developed for the layout of this city, no construction efforts were undertaken due to the surrender of the colony to Spain in 1779 (Bartram Trail Conference 1979:183).

Following the transfer of the region to Spanish control, agricultural development of the region continued. Unlike the earlier French colonists, the English settlers remained in East Baton Rouge Parish after their parent country's loss of the region. It was during this period that agricultural efforts expanded in or near the project area (Jennings 1962:18).

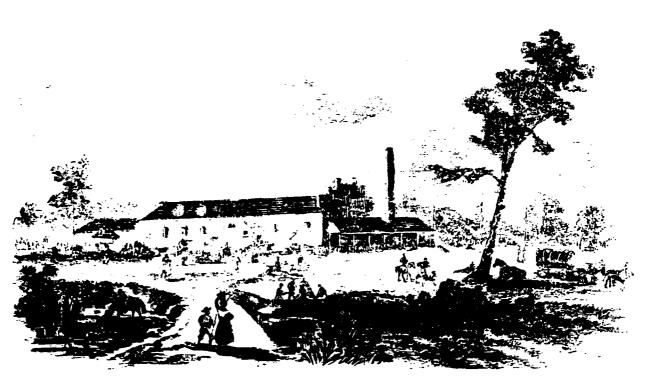
In 1811, the West Florida Parishes passed to the United States. Between this time and the Civil War, the region witnessed the expansion and intensification of agricultural production. Jennings' (1962) discussions of the history of the adjacent Plains region during this period suggest that cotton was the primary agricultural product of the plantation owners. Drawings from the Civil War period, however, display at least one large sugarhouse within the Plains region (Figure 11). This suggests that other cash crops were being produced in or near the project area. It should be noted that the primary landing utilized by river traffic during the colonial and antebellum periods moved from Fort Jackson, the major British colonial settlement, to Port Hudson in 1832 (Brown 1936).

The Civil War devastated the economy and lifestyle of most of the residents of the region. Early in the war, a local cavalry unit called the "Plains Rangers" was organized; it was attached to the First Louisiana Cavalry Regiment. These troops represented many of the men who resided in upper East Baton Rouge Parish. The unit participated in actions in northern Mississippi and Tennessee (Jennings 1962:52). Thus, the Civil War removed many of the planters, farmers, and landowners from the area. With the occupation of Baton Rouge by Federal forces in 1862, and the concomitant fortification of Port Hudson, many of the remaining families abandoned the region for safer districts. Those who remained found the continuation of antebellum lifestyles difficult due to the frequent Federal cavalry patrols through the region, to the siege and assaults on Port Hudson (March to July 1863), and to the continued patrolling by Federal forces during the



Map of Bartram's 1775 travels through Louisiana (from Bartram Trail Conference 1979:128b) Figure 10.

41



Figurell. General Paine's headquarters at the Chambers' sugarhouse (from Harper's Weekly, July 11, 1863).

occupation of the Port Hudson region. All of these factors contributed to the disruption of pre-war agricultural activities. In addition, the landing at Port Hudson was relocated to Alto, approximately 0.5 miles downstream, to avoid the siltation that prevented the use of the old landing at Port Hudson after 1863 (Brown 1936).

Following the Civil War, efforts to regain antebellum levels of agricultural production were hampered by the loss of capital, and of livestock and facilities. Until approximately 1880, agricultural production suffered due to the development of new labor systems (e.g., share cropping). Low prices for cash crops, and unsettled relations between the white landowners and local Blacks, either former slaves or former members of the occupation forces at Port Hudson, stifled agricultural recovery. The latter condition resulted in the development of "black market" operations for the sale of crops, the theft of various stores of agricultural produce, and violent encounters between antebellum landowners, Blacks, and northern immigrants to the region (Jennings 1962:87-95).

The late nineteenth century witnessed a rebounding agricultural economy in the region. Prices for sugar cane and cotton were higher than during the immediate post-war period. Alternate systems of production (e.g., share cropping or wage labor) were more widely accepted, providing the much needed labor to produce the crops upon which the economy of the region was based (Jennings 1962:96-97). This productivity is evidenced by the presence of numerous cotton gins and postbellum sugar mills in the vicinity of Port Hudson (Brown 1936:88-98).

During the same period, the landing at Alto was moved to Port Hickey, approximately 1 mile downstream, to avoid the siltation that closed the Alto landing by 1880. The landing at Port Hickey never enjoyed the intensity of river traffic witnessed at Alto or Port Hudson. Slumping of the bankline disrupted the use of the landing, and the construction of railroads to New Orleans provided a faster alternative to river transport. By 1905, Port Hickey landing was not used; commercial traffic passed along the railroad, located approximately 1.5 miles inland from Port Hickey (Brown 1936).

Around the turn of the twentieth century, the former staple commercial crops lost their importance. Brown (1936:98) notes that the last sugar mill in the Port Hudson vicinity closed around 1890 due to a scarcity of cane in the region. Between 1910 and 1912, the Mexican boll weevil entered the region. This caused great damage to cotton, which had become the primary cash crop of the region. This infestation, along with unusually wet weather during 1912, served to reduce the agricultural production of the

region substantially (Jennings 1962:106-7).

At this same time, however, a great boom in the lumber industry occurred. While sawmills operated at Port Hudson between 1866 and 1868, and later at Alto (Brown 1936:75,85), vital economic interest in local cypress and hardwood timbers developed ca. 1920. This helped to alleviate some of the economic problems encountered through the loss of sugar cane and cotton monocrop agriculture.

More recent use of the area has included oil and natural gas exploration and recovery in the Tuscaloosa Trend; recreational use of the area for hunting; and, recreational use of scenic areas along the river, especially following the establishment of a Louisiana State Commemorative Area at Port Hudson.

Historic Resources in or near the Project Area

One historic site has been recorded within the project area. As described above, the Mount Pleasant Plantation Site (16 EBR 62) lies near the northern boundary of Section 41, T5S, R2W. Artifacts recovered from this site (Shafer et al. 1984) confirm that it represents a late nineteenth and early twentieth century occupation. The land use and ownership history of Mount Pleasant Plantation will be described in detail in Chapter V. Remaining deposits from that plantation appear to be located approximately 350 meters north of the northern limit of the planned Faulkner Lake Revetment project construction area, and thus it should not be impacted by any planned construction activities.

The site 16 EBR 64 is located approximately 1.4 kilometers northeast of 16 EBR 62. This site was tested by Smith (1986) after its discovery and partial destruction during construction. The site is located on property owned by Georgia Pacific Company. The site represents a nineteenth century house, as well as a Civil War Union battery and camp for forces beseiging Port Hudson. No intact features or deposits were located at the site (Smith 1986).

CHAPTER V

MOUNT PLEASANT PLANTATION (16 EBR 62)

Land Tenure and Land-use at Mount Pleasant

Archival research concerning the archeological site 16 EBR 62, the remains of the Mount Pleasant Plantation, focused on land tenure and land-use within Section 41, of Township 5 South, Range 2 West. A chain of title was reconstructed for this property. Additional information then was sought concerning the owners or operators of the former Mount Pleasant Plantation, who were identified through the conveyance records. This information provided estimates of the total areal extent of the former plantation, data on the history of land-use at the plantation, and information on the agnatic, affinal, and economic relationships between some of the individuals who owned, lived, or worked on Mount Pleasant Plantation. The following review of the history of Mount Pleasant Plantation follows a period based chronology that reflects major events and trends in the development of the region.

The French Colonial Period (1716-1763)

The earliest known grants of land in the immediate area of Mount Pleasant Plantation date from the early eighteenth century. In 1716, a large grant of land was given to the Marquis de Mezieres which included parts of St. John's Plains and the adjacent property along the Mississippi River. The bluffs along the river which were to become the sites of port Hudson and Port Hickey were included in this grant, as evidenced by the name given to the property: "les Petite Ecores," or "the Little Cliffs" (Brown 1936:31; Jennings 1962:5-6). There is no direct evidence, however, that any French farms or plantations existed within the area that was to become Mount Pleasant Plantation (Jennings 1962:7).

The British Colonial Period (1763-1779)

The acquisition of West Florida by Great Britain in 1763 witnessed an influx of English colonists into the area. As described above, the site that was to become Port Hudson was selected by the British colonial administration as the location for the construction of the new capitol for the colony. Large grants to the north and east of Section 41, Township 5 South, Range 2 West, were given to Montfort Brown, governor of the colony. A number of parcels of land were granted by patent to English settlers; one of these patents included Section 41. This patent granted 355.92 acres to Israel Matthews in 1772. Adjoining parcels to the north and south were granted to Thomas Ackens

(Section 39), and to John Marks (Section 42), in 1768. Figure 12 depicts a survey plat, registered in the Surveyor General's Office in Donaldsonville in 1854, delineating the original English patents in and around the project area.

Land use at Mount Pleasant during the British Colonial period is unknown; no specific information concerning the Mount Pleasant area is available. Bartram (1791:432), during his travels through the area in 1775, describes the bluffs along the river in the Mount Pleasant area as forested. Therefore, there does not appear to have been any agricultural development of the area during Israel Matthews' early tenure as owner of the property.

The Spanish Colonial Period (1779-1810)

Following the seizure of West Florida from Great Britain by Spain, Spanish patents were issued for portions of Sections 40 and 43, in Township 5 South, Range 2 West. In 1789, a Mr. Proffit, presumably the George Proffit after whom Profit Island was named, received Section 40, in T5S, R2W. In 1794, Section 43, T5S, R2W, was patented to Da Sibil Nash (see Figure 12). Portions of both of these sections later would become part of the Mount Pleasant Plantation. Jennings' discussions (1962:18) of farming in East Baton Rouge Parish during the early nineteenth century indicate that corn and cotton were the primary agricultural products. However, there is no direct evidence either of residential settlement or of agricultural activity in the immediate vicinity of Mount Pleasant during the Spanish Period.

The Antebellum Period (1810-1861)

Title records of the project area for the early part of the nineteenth century are incomplete, and provide no information concerning the ownership or operation of the Mount Pleasant Plantation area. Sometime during this period, however, in unrecorded transactions, all of the sections in the present project area (Sections 39, 40, 41, 42, and 43, of T5S, R2W) became the property of John C. Faulkner and his wife, Eliza Flower. At least part, if not all, of this property derived from the estate of a William F. Faulkner, who deceased in 1830. However, that succession was not recorded. Upon the deaths of John C. and Eliza Faulkner, Samuel Faulkner, their son, took an oath to affirm his tutorship of his minor brother, John C. Faulkner, Jr. With the execution of that oath (Probate Record No. 55, 19th Judicial District Court, East Baton Rouge Parish), ownership of the estate of John C. and Eliza Flower Faulkner passed de facto to their heirs, Samuel Faulkner, John C. Faulkner, and Eliza Flower Hampton. However, the succession was not finally adjudicated until 1843.

In addition, some small parcels from the large Faulkner

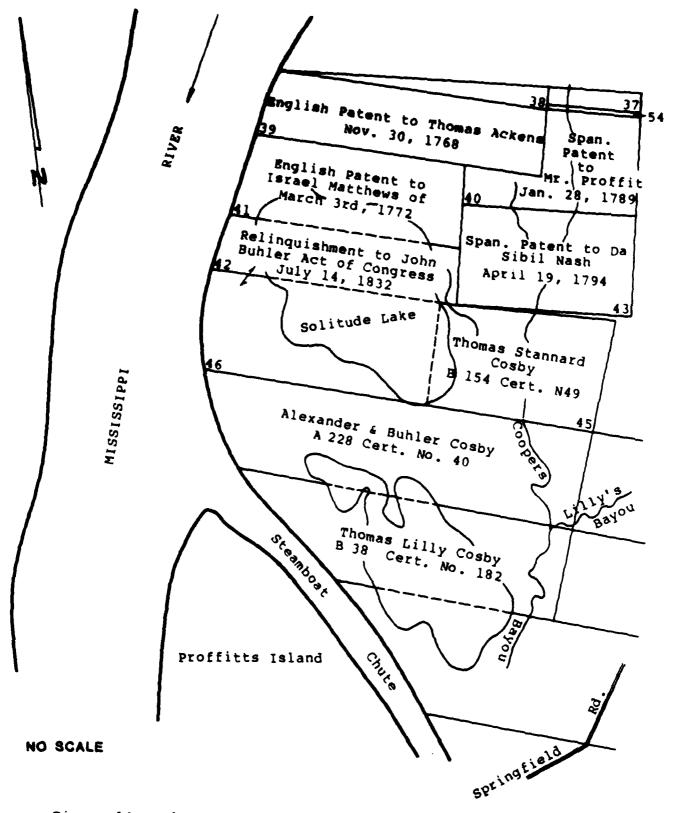


Figure 12. Plat of 1854 showing the original patents in the Faulkner Lake Project area. Patent filed June 19, 1854, Surveyor General's Office, Donaldsonville, Louisiana. (Map on file, Patent Records Section, East Baton Rouge Parish Courthouse).

estate were sold to other individuals. This is evidenced in the repossession (by purchase) by Samuel and John C. Faulkner of 300 acres in the southern portion of the property known as the Solitude tract from Francis Robards in 1842 (Notary Book F, Page 528, East Baton Rouge Parish). Robards bought the 300 acre parcel in 1840.

In 1843, Samuel Faulkner and John C. Faulkner acquired all of the property that comprised their parents' estate. The transaction recording that acquisition (Mortgage Book K, Page 449, East Baton Rouge Parish) noted that:

> Before Charles Tepier Parish, judge and ex officio auctioneer for East Baton Rouge Parish... did expose to public sale the property... belonging following to the succession of the late John C. Faulkner and Eliza Flower, both deceased... a tract of land or plantation... on the Mississippi River about eighteen miles above Baton Rouge, known as the Mount Pleasant Place, containing 2600 acres more or less... together with all the buildings and improvements thereon. Was adjudicated to Samuel and John Faulkner, being the last and highest bidder for the sum of \$15,000.00.

This description of the property as 2600 acres represents the maximum extent of the plantation during its documented history. The Faulkners apparantly were engaged in agricultural activities, since 32 slaves also formed part of this purchase. This transaction constitutes the earliest reference to "Mount Pleasant" recovered during this research effort. All subsequent changes in ownership of Mount Pleasant Plantation involve portions of the 2600 acre tract adjudicated to the Faulkner heirs in 1843.

Between 1843 and 1847, however, ownership of Mount Pleasant was contested. The basis of some of these competing claims appears to have been the questionable partition of the estate of William F. Faulkner in 1830, years before the death of John C. and Eliza Flower Faulkner. As noted above, the 1830 succession was not recorded, and subsequent transactions give the impression that this early succession was settled verbally between kin. Eliza Flower Hampton Thorpe, Samuel Faulkner, John C. Faulkner, and Harriet Matthews, the widow of Judge George Matthews (and a possible descendant of Israel Matthews, one of the original patent holders), claimed ownership of all or parts of the Mount Pleasant property.

Another basis for competing claims over this property was debt incurred by the Faulkner family prior to the decease of John C. and Eliza Flower Faulkner. For example, Mrs. Harriet Matthews'

right to part of the property appears to have derived from an "unsettled balance [\$10,000] due from the estate of the heir of (William?) Faulkner" which was listed as part of her husband's assets at the time of his death in 1837 (Charles L. Matthews Papers, Hill Memorial Library, Louisiana State University).

Eventually, Mrs. Eliza Flower Hampton Thorpe, the sister of John C. and Samuel Faulkner, acquired approximately 2200 acres of the formerly 2600 acre plantation, as the result of both the direct purchase of land from Harriet Matthews and through the renunciation of competing rights by her brother, Samuel Faulkner (Notary Book A2:136; Notary Book A1:180, East Baton Rouge Parish). In the latter transaction (Notary Book A1:180, East Baton Rouge Parish), Samuel Faulkner, who was named the legitimate heir to his parents' estate, renounced:

in favor of Elisa all right, claim, title, or interest in and to the Mount Pleasant Plantation which he may have or suppose to have, either from errors, defects, or irregularities in the partition sale of 1840, as well as the sale under judgement in 1846, said judgement being in favor of Eliza as heir to her father ..., and further renounces in favor of said Eliza the succession of William F. Faulkner, deceased in 1830, which... succession was not, or suppose not to properly represented been in administration, partition, and sale of the succession of John C. and Eliza Faulkner, and in the execution of the above judgement, and the said Samuel further declared... that this ratification... of all and every of the above matters is done with the intention of curing all defects relative to said matters..., and for the said purpose of quieting Eliza in all her possessions growing or arising out of the succession of John C. and Eliza Faulkner.

Figure 13 shows the landholdings at Mount Pleasant as of August 18, 1847.

In 1849, William H. Sparks purchased 1500 acres of land from Eliza Flower Hampton Thorpe; that land was stated to comprise the Mount Pleasant Plantation (Notary Book A2:307, East Baton Rouge Parish). Within three months, Sparks entered into an agreement with Judah P. Benjamin, of Plaquemines Parish, to run the plantation. Through this agreement, Sparks would reside on the property, hire an overseer, and manage locally the affairs of the plantation. Benjamin provided capital (in the form of equipment, slaves, and animals), and he acted as agent and accountant for the

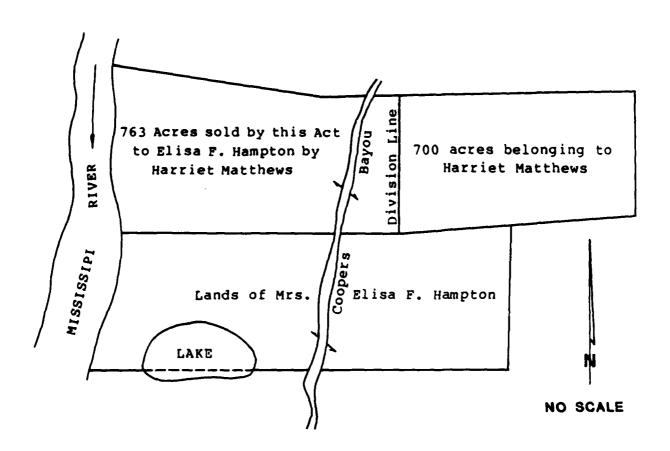


Figure 13. Plat of 1847 showing the landholdings including and adjacent to Mount Pleasant Plantation (Notary Book A2:136, East Baton Rouge Parish).

plantation in New Orleans (Notary Book Al:253-256, East Baton Rouge Parish). Sparks was unable to maintain his mortgage payments to Mrs. Thorpe. Thus, the entire estate (approximately 1500 acres) was auctioned and purchased by Judah P. Benjamin at a sheriff's sale in 1851 (Indices of Sheriff's Sales 6:91, East Baton Rouge Parish).

Judah P. Benjamin, who later became Vice President, Secretary of State, and Secretary of War of the Confederate States, owned the property from 1851 until 1858, when he sold Mount Pleasant Plantation to Samuel P. Russ (Notary Book 0:179, East Baton Rouge Parish). In 1859, Russ sold the property to Mary Cobb Stirling (Notary Book Q:453, East Baton Rouge Parish). Stirling maintained her title to Mount Pleasant throughout the Civil War. She sold the property back to Russ in 1866 (Notary Book U:297, East Baton Rouge Parish).

Land use at Mount Pleasant Plantation during the antebellum period is difficult to reconstruct. The purchase of slaves by Samuel and John C. Faulkner at the time of their acquisition of the property in 1843 suggests that some sort of agricultural activities were ongoing; that transaction also referenced buildings on the property, although the nature of those structures was not described. The Sparks-Benjamin agreement clearly indicates an intention to produce a cash crop. Sugar reports for the antebellum period list Sparks and Benjamin in 1850-1851 and 1851-1852, and Benjamin for 1852-1853 and 1853-1854; however, no yields are given for any sugar crops during these years (Bouchereau and Bouchereau 1850-1854). As noted above, sugar and cotton were both produced within the region. Most of the owners of Mount Pleasant during this period probably attempted to grow either or both of these commercial agricultural products.

Better evidence of the nature of the Mount Pleasant Plantation economy is found in the record of the sheriff's sale of 1851, when Benjamin purchased the property after the dissolution of his partnership with Sparks. Commodities conveyed with this sale of the plantation (Indices of Sheriff's Sales 6:91, East Baton Rouge Parish) included 960 bushels of corn, one lot of fodder and hay, 1250 cords of wood, two cows and calves, 120 head of hogs, one wagon and harness, two ox-carts, three horse-carts, one lot of farming utensils and tools, 41,000 shingles, 45,000 bricks, eleven oxen, and one flat (sledge for hauling materials?). These items suggest that corn, hogs, lumber, firewood (for passing steamboats?), and shingles were produced at Mount Pleasant. presence of 45,000 bricks suggests a likelihood that a brick kiln was present at Mount Pleasant; local clays are well-suited to brick making, and modern potters in the Baton Rouge area still recover clay from the bluff at Mount Pleasant to use in the production of "Port Hudson" pottery. No direct evidence of a kiln was found in

the archival record.

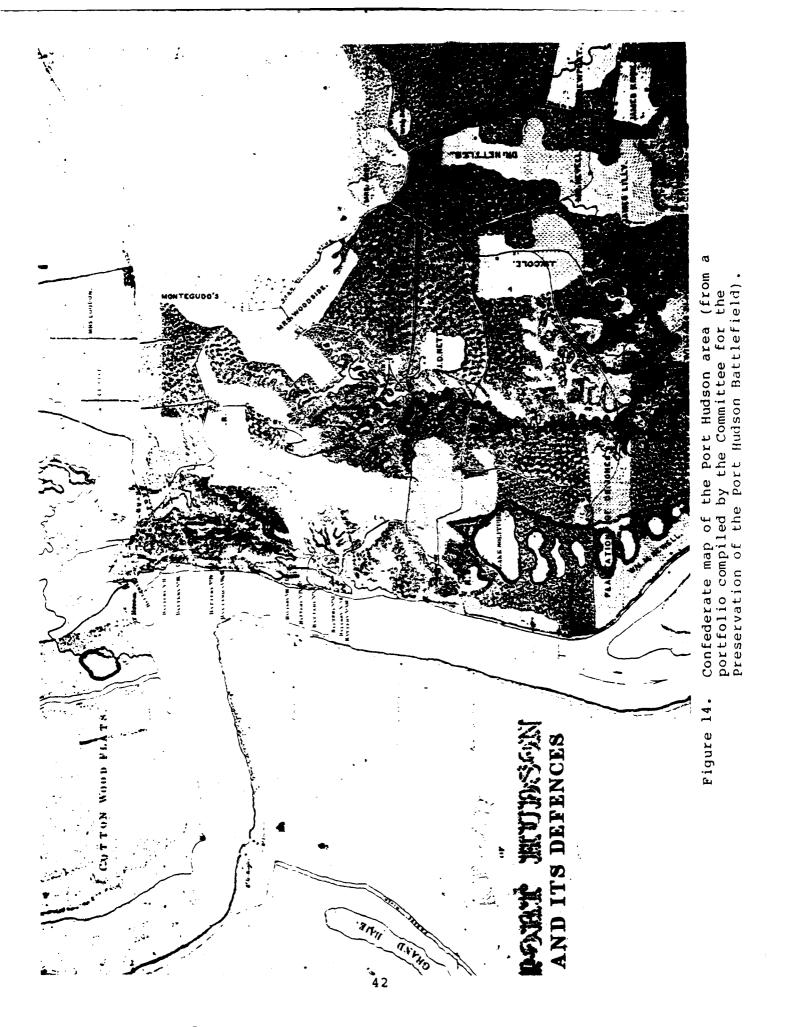
It should be noted that Judah Benjamin's interest in Mount Pleasant may have derived from his involvement in the construction of railroads through the region. In 1849, Benjamin actively pursued the construction of a railroad across the Isthmus of Tehuantepec in Mexico. In addition, he had financial interests in the railroad that ran from New Orleans to Jackson, Mississippi (Meyer 1968:7). Benjamin may have been acquiring property throughout the region in an effort to facilitate construction of the railway, thus benefitting financially from its eventual construction.

The Civil War Period (1861-1865)

During the Civil War, agricultural activities were disrupted throughout the region containing the project corridor. With the capture of New Orleans in April, 1862, and of Baton Rouge in May of that same year, the lower part of the Mississippi River fell under Federal control. The area around Port Hudson became the scene of intense activities aimed at fortifying the bluffs, and thereby preventing the Federal fleet, under Admiral David Farragut, from ascending the river. As discussed below, a Federal ascent of the river beyond Port Hudson would have permitted the concentration of Federal naval forces around Vicksburg, closing the Red River to travel by Confederate supply vessels.

Throughout this period, Mount Pleasant Plantation was owned by Mary Cobb Stirling (Notary Books Q:453 and U:297, East Baton Rouge Parish). However, a Confederate map of the area prepared in 1863 (Figure 14), lists another name at the approximate location of the Mount Pleasant Plantation (i.e., just north of Lake Solitude, or later Faulkner Lake). While this name is illegible (Figure 14), it does not appear to be Stirling. This discrepancy suggests that Mount Pleasant was an absentee owned plantation, with a resident overseer. Nevertheless, it is probably safe to assume that the scale of agricultural production at Mount Pleasant was small during the Civil War, providing subsistence items for the immediate occupants, if any were present.

During the Civil War, Mount Pleasant also was the venue of the initial line of Confederate defenses for Port Hudson, which were built but never occupied (Fred Benton, personal communication 1986; William Spedale, personal communication 1986), and of a stockade which was constructed "at or near Mount Pleasant" by Federal occupation forces (Jennings 1962:76). These structures are discussed more fully below. None was in or near the project corridor.



The Postbellum Period (1866-1900)

Between 1866 and 1868, Samuel P. Russ acquired and resold the Mount Pleasant Plantation two more times. In 1867, Russ sold Mount Pleasant to William A. Maryman, who sold it back to Russ in 1868 (Notary Book W:137, 414, East Baton Rouge Parish). That same year, Russ sold the plantation to Samuel H. Smith of Eric City, Ohio (Notary Book X:45, East Baton Rouge Parish). Smith and his heirs remained the owners of the property until the 1880s.

In 1882, the succession of Samuel H. Smith granted a lease of three years to James A. Hyce (Indices of Vendors/Vendees 6:344, East Baton Rouge Parish). Later that year, the property was sold to Rilda Snowden (Indices of Vendors/Vendees 6:533, East Baton Rouge Parish). Evidently, Hyce was able to maintain his lease, since his name is shown at the property on the 1880-1881 Mississippi River Commission map of the area. In 1885, the property passed to James S. Snowden, the son of the former owner (Indices of Vendors/Vendees 8:269, East Baton Rouge Parish). Mr. Snowden sold the property to his lessee, James A. Hyce, soon thereafter (Indices of Vendors/Vendees 50:113, East Baton Rouge Parish). Hyce retained ownership of the plantation from 1885 until 1912.

During this period, land use at Mount Pleasant focused on agricultural production. Samuel H. Smith, Jay C. Smith, and William P. Bates entered into an agreement to cultivate the Mount Pleasant and Port Hickey plantations following the acquisition of these properties by Samuel Smith in 1869 (Notary Book Y:3, East Baton Rouge Parish). Records of agricultural produce did not appear, however, until the 1881-1882 and 1882-1883 sugar reports for East Baton Rouge Parish (Bouchereau and Bouchereau 1881-1883). Listings for S. H. Smith for sugar production during these seasons revealed that 50 hogsheads and 22 hogsheads of sugar were sold in 1881-1882 and 1882-1883, respectively. Mount Pleasant was not listed again in the sugar and rice reports until 1891-1892. During that season, J. A. Hyce, of Mount Pleasant, is listed with no yield recorded (Bouchereau and Bouchereau 1891-1892). While some efforts were directed toward the production of sugar on the Mount Pleasant Plantation during the latter part of the nineteenth century, recorded yields were modest at best.

The Modern Period (1900-Present)

James Hyce retained ownership of the property until his death in 1912. At the time of his succession, the Mount Pleasant Plantation was sold to Robert and Louis Holmes of New Orleans (Indices of Vendors/Vendees 50:113, East Baton Rouge Parish). In 1917, Robert Holmes sold his share of the plantation to Louis Holmes (Indices of Vendors/Vendees 68:5, East Baton Rouge Parish).

In 1922, Louis Holmes sold the plantation to the New Orleans Cattle Loan Company of Arabi, Louisiana (Indices of Vendors/Vendees 103:279, East Baton Rouge Parish). This company was owned by the Holmes family. In 1923, the plantation was sold to the Gulf Investment Corporation, Inc. of New Orleans (Indices of Vendors/Vendees 116:325, East Baton Rouge Parish). This corporation retained ownership until 1927 when the property was sold to Edward Eagle Brown (Indices of Vendors/Vendees 189:181, East Baton Rouge Parish). Brown sold the plantation to C. B. "Doc" Pennington, the present owner, in 1955 (Indices of Vendors/Vendees 1161:11, East Baton Rouge Parish).

During the twentieth century, the lumber industry and oil and gas exploration and recovery added new dimensions to established patterns of land use. Agricultural pursuits, trapping, and fishing no doubt persisted on or near the plantation. In 1912, Hyce granted a lease to H.A. Fitzhugh for use of the lakes on the plantation for fishing and alligator hunting.

The acquisition of the property by Robert and Louis Holmes and the New Orleans Cattle Loan Company occurred during the peak of the lumbering industry in Louisiana. It is interesting to note that the cypress timber, standing and cut, was sold separately from the land when the New Orleans Cattle Loan Company sold the plantation to the Gulf Investment Corporation, Inc. Also, the Mississippi River Commission maps of 1880-1881 and 1921 display different types of forest for the plantation. During the earlier survey, the uplands along the bluff were covered with qum and hackberry. By 1921, the uplands were forested with hickory, ash, and pines; all of these produce high quality timber, and appear to represent silvaculture. Undoubtedly, the lower lands along the lakes contained cypress as evidenced by the abovementioned sale of timber with the land. As late as 1952, Brown sold the timber on Mount Pleasant Plantation to King Lumber Industries (Indices of Vendors/Vendees 972:326, East Baton Rouge Parish). Later, with the discovery of oil within the Tuscaloosa Trend, the region surrounding Mount Pleasant Plantation became an active oil field.

The Cain Cemetery

The U.S.G.S. New Roads 15 minute topographic quadrangle (Figure 2) shows the Cain Cemetery on the northern boundary line of Section 41, in T5S, R2W. This cemetery was destroyed since the map was produced in 1963. As of two years ago, only two unmarked depressions, thought to be graves, remained on top of the bluff (Fred Benton, personal communication 1986). All other headstones or cemetery features have slumped with the edge of the bluff into the river channel. The cemetery's name is apparently derived from the only surviving tombstone. This stone, bearing the name of Cain and indicating the date of death as 1837, is now at the

Louisiana Rural Folklife Museum in Baton Rouge. Given a homologous date of death with that of John C. Faulkner, Sr., it is possible that "Cain" was Faulkner's middle name. Other markers with the name Faulkner have fallen into the river (Fred Benton, personal communication 1986). Since the name Faulkner was represented at the cemetery, it is not unreasonable to assume that this cemetery represents the plantation cemetery of Mount Pleasant (ca. 1830-1850). If so, the Cain Cemetery should be considered as a component of 16 EBR 62, the Mount Pleasant Plantation site. No archival documents supporting this supposition have been discovered. If any buried portions of the cemetery remain on top of the bluff, they would be located approximately 400 meters north of the northern limits of the planned construction. Therefore, no impacts to the remaining portions of the cemetery, if any exist, are expected as a result of the planned construction activity.

CHAPTER VI

CIVIL WAR ACTIVITIES IN THE PROJECT AREA

Introduction

The beginning of the Civil War on April 12, 1861, was followed by the rapid mobilization of troops on both sides. As stated in the Chapter IV, a cavalry unit was organized in the region containing the Faulkner Lake Project area. This unit included many of the inhabitants of plantations near the project area (Jennings 1962:52). The most dramatic activities in the region during this period, however, revolved around Confederate efforts to fortify Port Hudson and subsequent Union efforts to capture the town and its strategic bluffs. Discussions of activities related to this major emphasis of Federal strategy (i.e., the control of the Mississippi River) provide a framework for understanding potential Civil War period resources in the project corridor.

The Fortifications of Port Hudson

The strategic objective of Federal armies involved the capture and control of the Mississippi River along its length through the Confederacy (i.e., from its mouth in the Gulf of Mexico to its juncture with the Ohio River). All Federal efforts in the West were directed toward this goal (Symonds 1983:7). Federal forces occupied upper stretches of the river early in the War. Following the capture of Memphis in June, 1862, General U.S. Grant was in a position to move his forces south and assault the fortified bluffs at Vicksburg, Mississippi (Symonds 1983:69-71).

Simultaneously, General Benjamin Butler and Admiral David Farragut moved up the Mississippi River from the Gulf of Mexico, capturing New Orleans in April of 1862, and Baton Rouge in May of the same year. The Confederate forces began constructing fortifications along the bluff at Port Hudson, Louisiana, because of its strong defensive position. Control of the river was made possible by the height of the bluff, and by the configuration of the river. Confederate control of Vicksburg to the north and Port Hudson in the south assured that supplies and men could still be moved by boat from Texas along the Red River and into the Mississippi River for transshipment to the more eastern portions of the Confederacy. The loss of either of these fortified towns would permit the passage of Union gunboats along the length of the Mississippi and up the Red River, thereby severing the western supply lines of the Confederates (Irwin 1892:72; Raphael 1975:73).

Early in 1862, Confederate forces began massing at and fortifying the Port Hudson area (Irwin 1892:77-84). The bluff could not be assaulted from the river without great risk. To the interior, however, the area was flat and virtually treeless. This prairie provided easy access to the town and the strategic bluff. Therefore, Confederate efforts to hold Port Hudson concentrated on the construction of earthworks on the landward side of the town and bluff.

The initial construction efforts attempted to enclose a very large portion of the surrounding area, stretching eight miles from a point just above Lake Solitude (Faulkner Lake) east and north to Sandy Creek on the north side of Port Hudson. One or two lunettes (separate arcuate earthworks) of this original defense line are still present on the escarpment above Faulkner Lake in Section 41 of T5S, R2W (Fred Benton, William Spedale, personal communications 1986; also see Figures 22 and 23). These positions were never occupied by Confederate armed forces; they may have been constructed by engineering units, possibly with slave labor (William Spedale, personal communication 1986). In any event, when General Gardner took command of Port Hudson, the defense lines were reduced in length to accommodate the smaller number of troops available for his defense of the town (Irwin 1892:163).

The shorter line of Confederate positions began in the south at a point approximately at the southward bend of the present Mississippi River channel in Section 37 of T4S, R2W. The works extended 4.5 miles in an arc northward to Sandy Creek (Irwin 1892:163), returning to the river bluff above Port Hudson in Section 60 of T4S, R2W. Figure 15 depicts these positions; it also shows the position of the Federal fleet on March 14-15, 1863, and the Union siege positions of May to July, 1863. These positions were actively occupied and defended by the Confederate forces from March to July of 1863 (Irwin 1892). None of these fortifications exist either within the larger rights-of-way or the impact area of the Faulkner Lake Revetment project.

Activities around Port Hudson

Federal efforts to bypass and assault the bluff of Port Hudson began in earnest in March of 1863. In an effort to get his fleet past the batteries, Farragut asked the Army, under the command of General Nathaniel P. Banks, to assault the Confederate positions from the east during the early morning of March 15, 1863. At the same time, the Union fleet would pass up the river, under covering fire from the U.S.S. Essex and Sachem, and from a group of mortar boats. The mobile elements of the fleet, consisting of the U.S.S. Hartford, Albatross, Richmond, Genessee, Kineo, Monongahela, and Mississippi, were lashed in pairs to provide protection for the

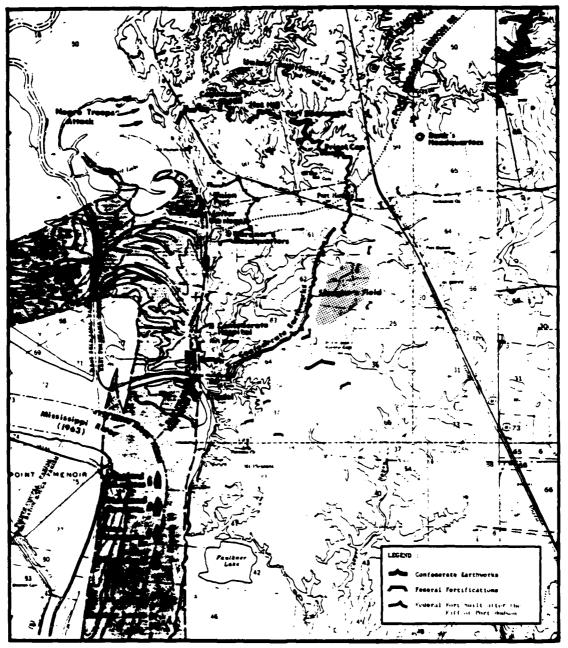




Figure 15. Portion of the USGS Port Hudson 15 minute quadrangle showing the location of Civil War entrenchments and fortifications around Port Hudson (after Gunduz 1973:76).

boats and to permit assistance if either partner suffered engine failure. The vessels were paired in the order listed above; the U.S.S. Mississippi was the only single ship (Irwin 1892:79). Figure 16 shows Farragut's fleet shelling the batteries at Port Hudson during the evening of March 14-15, 1863.

Due to various complications and to a possible change in Farragut's orders, the fleet moved upriver late in the evening of March 14, 1863, before Banks' infantry and artillery units were in place to attack the Confederate positions from the landward side. When the Federal fleet was spotted, Confederate troops on the west bank of the river set large bonfires which helped to illuminate the The first two vessels, Hartford and Albatross, managed to pass the guns and escape upstream from the fortress. The next four vessels experienced engine troubles or steering failures, due to Confederate fire and/or mechanical difficulties. These vessels were forced to withdraw downstream from the Confederate positions, primarily moving with the force of the current. The seventh vessel, the U.S.S. Mississippi, traveling without a companion, ran aground near the west bank of the river. The Confederate guns fired on the immobile vessel until her magazine exploded (see Figure 17). While most of the Federal boats engaged in the action were damaged and remained south of the town, Farragut's two ships north of Port Hudson were able to interdict supply vessels, halting free access by Confederate ships to any portion of the Mississippi River (Irwin 1892:79-81).

During the next two months, Gardner strengthened his positions around Port Hudson, while Banks sortied through the Atchafalaya Basin and Farragut raided up the Mississippi as far as Vicksburg. During the middle of May, 1863, Banks' 19th Army Corps returned to Port Hudson in force with the intent to surround and subdue the garrison. Farragut took command of the fleet elements below Port Hudson (consisting of the U.S.S. Monongahela, Richmond, Genessee, and Essex, and the mortar flotilla), while Commodore Palmer commanded the vessels above the town (consisting of the U.S.S. Hartford, Albatross, Sachem, Estrella, and Arizona). With the exception of the first two vessels, the other members of this flotilla passed through the Atchafalaya Basin to arrive north of Port Hudson. With the support of these naval units, a complete encirclement of the Confederate positions was possible.

General Banks arrayed his troops before the Confederate positions. He established a large number of batteries along the entire length of the Confederate lines. Behind these positions were numerous camps where the occupants or assault troops bivouacked before or after their attempts to breech the Confederate lines. Figure 18 shows a map prepared by some of Banks' engineers after the battle; it displays the position of Union and Confederate batteries and troops during the siege. Site





Parragut's Weekly Lantation

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Figure 17. The Lower Mississippi Fleet led by Admiral Farragut March 14-15 ... U.S.S. Mississippi on fire and aground (from Leslie's Illustrated Newspaper).



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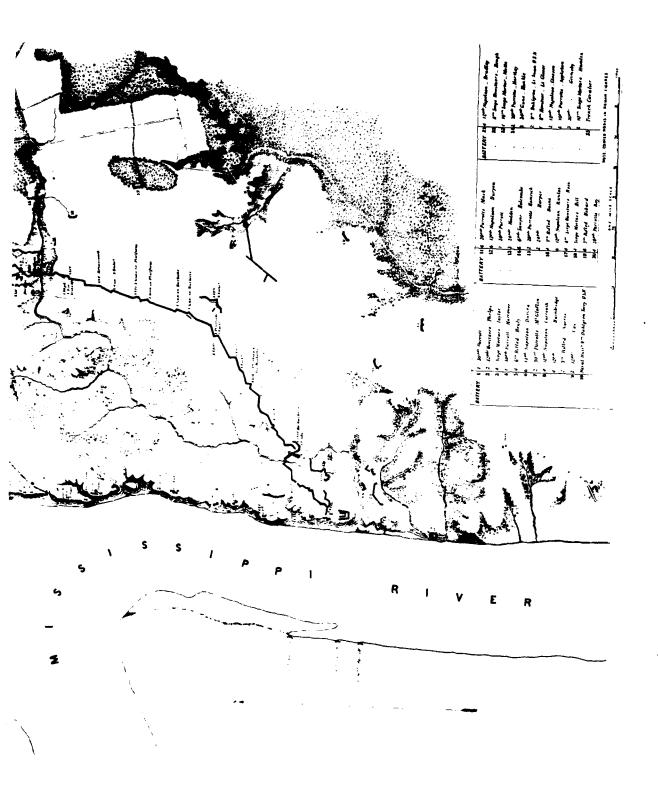


Figure 18. Houston and Hains' map of 1864 showing the location of Civil War fortifications around Port Hudson (from a portfolio compiled by the Committee for the Preservation of the Port Hudson Battlefield).

16 EBR 64 represents Troth's house and Union Battery 20 as shown on Figure 18.

The siege of Port Hudson lasted until July 9, 1863. This was the longest siege of the war. During this time, two major assaults were attempted by the Union forces besieging the town, the first on May 27, and the second on June 14. Neither was successful. Innumerable efforts to sap the Confederate positions also were attempted and repulsed by the weakening defenders. During the siege, naval units above and below the town maintained steady barrages on the Confederate batteries and positions. Much of this bombardment would have passed over the project area from south to north, since Profit Island Chute was employed as a safe position for the ships to fire upriver. Figures 19 and 20 display contemporary views of this naval bombardment during the siege. Portions of the project area are visible in both of these illustrations.

Throughout the siege, Federal forces and supplies were transported across the river at the bottom of Profit Island Chute. From this point, troops and supplies moved northward along the River or Mount Pleasant Road, or inland along the Bayou Sara Road which passed through Plains near the northern end of the battlefield. The former road passed along Mobile Ridge (emerging at the lower lefthand corner of Figure 18). This is the approximate location of the area identified as Mount Pleasant, and it coincides with the approximate northern limit of the planned construction area. This area is located approximately 1 kilometer (0.6 miles) east of the the 1863 river channel. Figure 21 is a contemporary view of Springfield Landing during the siege operations. The project corridor would cross Profit Island Chute in the left center of that illustration.

Following the surrender of the Confederate garrison, a number of Black regiments were left to occupy Port Hudson and the surrounding countryside. Jennings (1962:76) states that these troops erected a stockade at or near Mount Pleasant to guard the road to Springfield Landing. At least one raid by local Confederate cavalry, who continued to operate in the area until the end of 1864, was made on this structure. The area was left to the Federal occupation forces after the cavalry units retired in December of 1864 (Jennings 1962:77).

Related Resources Expected in the Project Corridor

From the above discussions, it is possible to determine the nature of potential resources related to the Civil War activities which may occur in the project corridor. No fortifications appear to have been constructed within the existing rights-of-way of the

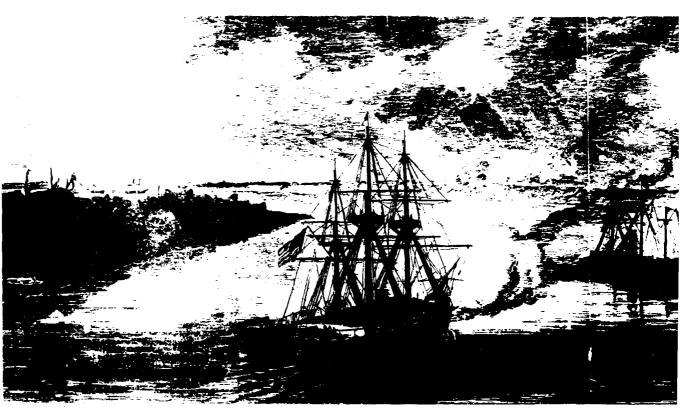
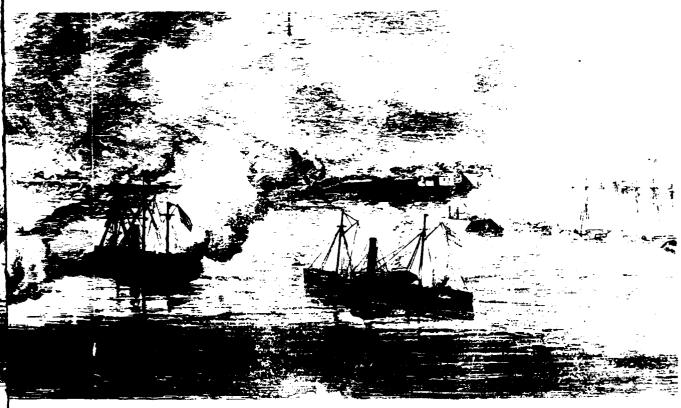


Figure 19. Bombardments of Port Hudson by Admiral Farragut's fleet (from Leslie's Illustrated Newspaper, June 27, 1863). The project area would be in the right center of the picture.



agut's June e right

RML OF CIVILIZATIO

Voc. VII. -- No. 342.]

NEW YORK, SATURDAY, JULY 18, 1863.

Increase according to Act of Concress, in the Year 1863, by Harper & Boshers, in the Clark's Office of the District Court for the Southern District of New York.



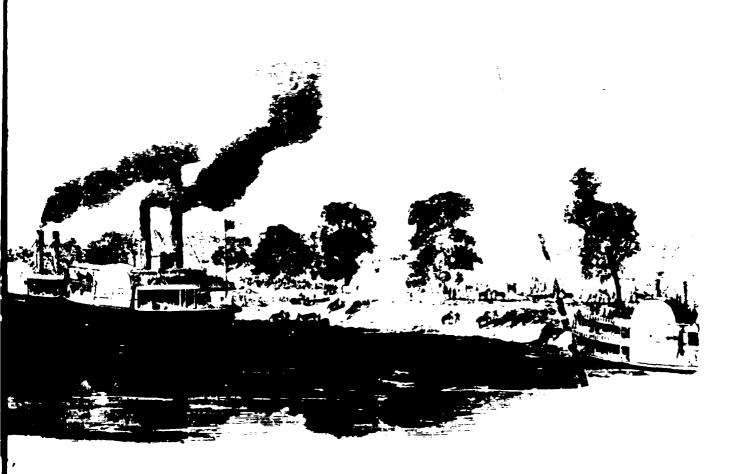


The bombardment of Port Hudson-the 100 lb.

Parrot gun of the Richmond at work (from Harper's Weekly, July 18, 1863). The extreme northern end of the project right-of-way is visible at the right center edge of the picture.



Figure 21. View of Springfield Landing (from Harper's Weekly, July 11, 1863). The view is northwest through Profit Island Chute. The project area would be in the left center of the picture at the upper end of the chute.



revetments or the chute closure. The Mount Pleasant stockade mentioned by Jennings (1962:76) would have stood inland from the present bankline, well beyond the project corridor. A Union encampment was located at Cain Cemetery, located just north of 16 EBR 62 (Figure 2), within the Mount Pleasant Plantation boundaries (Dr. Larry Hewitt, personal communication 1986). This cemetery, however, has been eroded away by the collapse of the bluff, with the exception of two possible unmarked graves (Fred Benton, personal communication 1986). Therefore, it appears that little of the reported camp remains intact within the larger project corridor. Also, the location of this site, if part of it has survived, is well north of the planned construction zone, and it will not be impacted by revetment construction planned up to Range U-57 + 50.

Intensive river traffic occupied the lower reaches of Profit Island Chute. In addition, Farragut's flotilla used the upper end of the chute as a firing position. While these activities could have produced numerous opportunities for sunken vessels, no records of any such occurrences exist. The U.S.S. Mississippi was the only vessel lost during the activities around Port Hudson. All accounts suggest that this ship grounded on the west bank of the river and exploded. While portions of the vessel may have drifted into the project corridor, there has been no discovery of any artifactual evidence. Magnetometer and side scan sonar surveys conducted by the New Orleans District during 1985 along the east bank of the river and in Profit Island Chute failed to reveal any targets suggestive of sunken vessels or ship wreckage.

Thus, Civil War period artifacts that may be expected within the project corridor consist of projectiles from either of the combatant positions that failed to carry to their proper targets. Otherwise, no other sites or features associated with the Civil War era are expected to occur within the project corridor.

CHAPTER VII

SUMMARY AND RECOMMENDATIONS

Cultural Resources Documented Within the Project Corridor

No intact cultural resources have been identified within the portions of the project corridor that have experienced or that will experience impacts from revetment construction. This undertaking will not affect any previously known National Register of Historic Places properties, or properties determined to be eligible for the National Register. In fact, the revetment construction will not affect any known cultural resources whatsoever.

Two archeological sites have been recorded to the north of the area of planned revetment construction. The location of all identified or potential resources are displayed with respect to current engineering plans in Figure 22. Figure 23 depicts the location of these resources on regional topographic maps.

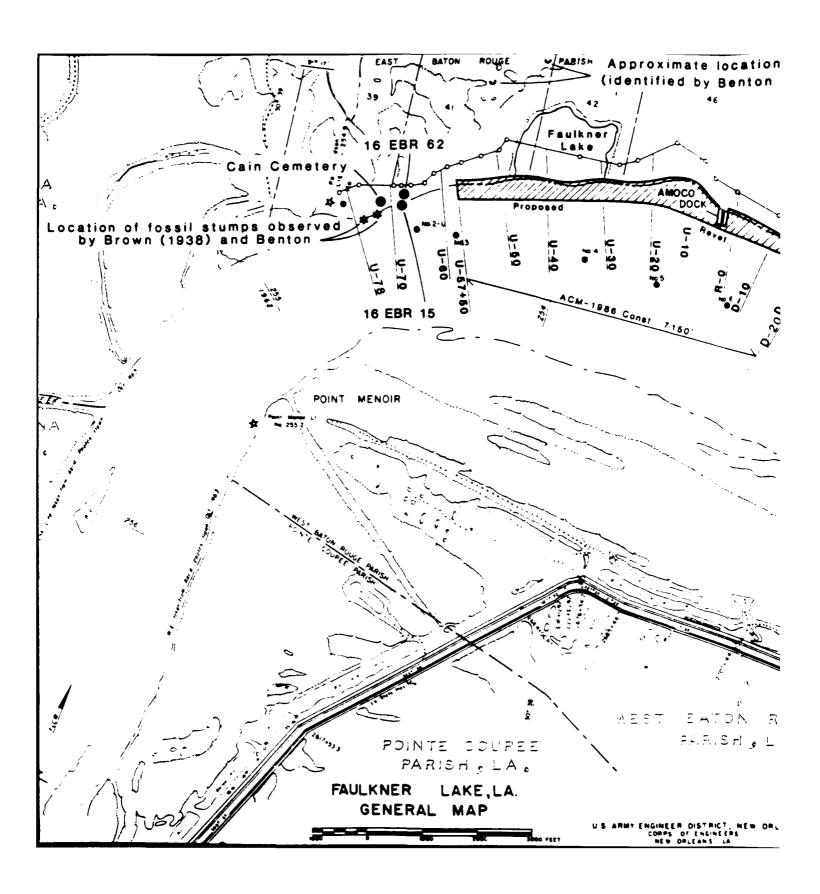
Prehistoric Resources

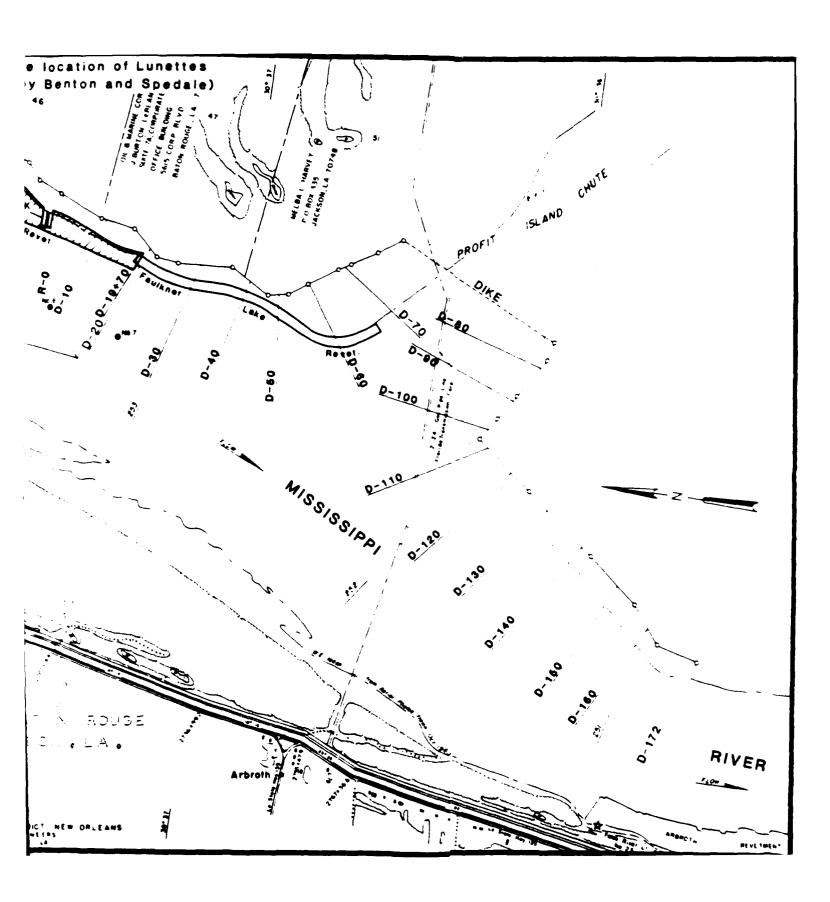
One prehistoric site, 16 EBR 15, has been discovered along the Mount Pleasant bluff. This site consists of a single crude stone chopper discovered in slumped material at the base of the bluff. The exact location of the discovery is unknown, but appears to be near Range U-70. No information concerning the original stratigraphic context of the artifact is available. The lack of other associated cultural remains limit the research potential of 16 EBR 15 to the locational information recovered to date.

Historic Resources

Site 16 EBR 62 represents structural remains and refuse from part of the historic Mount Pleasant Plantation. The present site boundaries encompass approximately 2.6 acres adjacent to the top of the bluff in the NW 1/4 of Section 41, T5S, R2W. The maximum extent of the Mount Pleasant Plantation encompassed 2600 acres in Sections 40, 41, 42, 43, 45, and 46. This area includes the present site of 16 EBR 62 and Cain Cemetery. The exact nature of the remains at 16 EBR 62, and of their relationship to the plantation or to structures depicted on historic maps of the project area, are unknown. No additional field assessments have been conducted beyond those of the National Park Service (Shafer et al. 1984).

The only cultural remains observed during a site visit to 16 EBR 62 on September 30, 1986 consisted of a single brick "piling" in





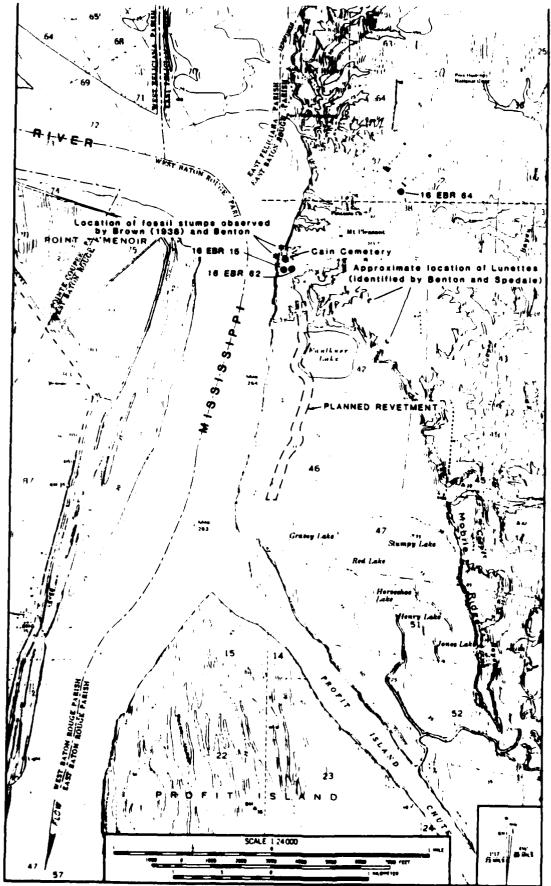


Figure 23. Composite of the USGS Port Hudson and Walls 7.5 minute quadrangles showing the location of identified resources near the Faulkner Lake Project area.

the eroding face of the bluff. The last known structure associated with the nineteenth century occupation was destroyed around 1970 to 1972 when it caved with the bankline into the river (Dr. Larry Hewitt, personal communication 1986).

Since 1883, approximately 1000 feet (305 meters) of land has been removed through the eastern migration of the river bank (see Figure 11). This migration has destroyed many of the features that would have been associated with the plantation such as its landing, structures formerly located on the floodplain adjacent to the river, and structures formerly located on the bluff west of the present bankline. Most of the features described in the limited archival sources concerning the plantation have been destroyed by the migration of the river. Because of the demonstrable loss of most of the plantation's components to the river, it is highly unlikely that this disturbed archeological site has the potential to contribute to the understanding of history [36 CFR 60.4(d)]. At present, there is no archival information to suggest that other components of the plantation besides the remains at 16 EBR 62 exist in or near the project area. In addition, any material remains of the plantation that may have survived to the present would exist east and north of the current project area, well outside of the area scheduled for grading and construction.

The association of the Mount Pleasant Plantation with noted historical personages is limited at best. While the property was owned by the luminary Judah P. Benjamin between 1851 and 1858, there is no evidence to suggest that he ever resided on the plantation. Benjamin is noteworthy since he later became Vice-President, Secretary of State, Secretary of War, and a roving Ambassador of the Confederate States of America. However, the periods and events of Benjamin's life that confer significance to him as a personage postdate his ownership of the plantation. Benjamin's connections to the property derive from his antebellum business ventures, either agricultural or speculative, rather than from serious intent to establish residence within East Baton Rouge Parish. Benjamin also owned large parcels of land in Plaquemines Parish, and along the Red River.

Although fieldwork was not undertaken as a component of this study, archival and historic map research, and oral informant interview data, all indicate that Mount Pleasant Plantation does not possess significant research potential as an archeological site. This conclusion is based on historic loss of integrity of both standing structures (now destroyed) and their associated archeological deposits. Similarly, there is no direct association with the periods or activities that confer significance to the life of Judah P. Benjamin. And, associations with significant events in American history, e.g., the Civil War, are not reflected in any material remains that have been identified

to date. All available data point to locations for relict military structures on the escarpment behind the project area under consideration here. Thus, there is no compelling argument for the significance of Mount Pleasant Plantation in terms of the National Register of Historic Places criteria (36 CFR 60.4).

A potential historic resource is the Cain Cemetery, just to the north of the boundaries assigned to Mount Pleasant Plantation (16 EBR 62) by the National Park Service (Shafer et al. 1984). This cemetery was shown on 1963 topographic maps of the region. Much of the site has been destroyed by the continued slumping of the bluff. In 1984, two unmarked graves still remained on top of the bluff. All the headstones and monuments are reported to have fallen over the edge of the bluff some years before (Fred Benton, personal communication 1986). The only recovered marker from this cemetery presently is stored at the Louisiana Rural Folklife Museum in Baton Rouge. While the recovered marker bears the name Cain, markers which have been lost bore the name Faulkner (Fred Benton, personal communication 1986). suggests that this cemetery was the nineteenth century Mount Pleasant Plantation burial ground and should be considered a component of 16 EBR 62, if present. The cemetery also may have been employed as a Union camp during the siege of Port Hudson (Dr. Larry Hewitt, personal communication 1986). The Faulkner Lake Reverment project, as shown on Figure 22, does not extend far enough north to affect Cain Cemetery.

Potential Cultural Resources Within the Project Corridor

Potential resources within the area of planned construction represent prehistoric or protohistoric archeological sites, and bearing geologic deposits. Late prehistoric protohistoric resource procurement loci may exist in the alluvial bottomlands which comprise the portion of the project area between Ranges D-19+70 and U-48. If any of these resources are present in the project corridor, they are predicted to be small and to possess low densities of artifacts (cf. Hemmings 1981; Poplin et al. 1987; Weinstein and Kelly 1984). Their hypothesized location would be concentrated near the oxbow lakes which occupy this portion of the floodplain. Only one of these lakes, Faulkner Lake, lies within the planned construction area. Therefore, impacts to this potential resource base would be minimal to nonexistent.

Prehistoric and Protohistoric Resources

Most portions of the project corridor possess the potential to contain buried prehistoric or protohistoric cultural resources. Those portions of the project corridor on the Mount Pleasant bluff could contain sites dating from the Paleo-Indian

period through the protohistoric period. There is no archival information that demonstrates that protohistoric resources exist in this portion of the project area.

Those portions of the project area lying on the alluvial floodplain on the east bank of the river possess the potential to contain late prehistoric and protohistoric cultural resources. As noted previously, it is likely that such sites would constitute subsistence activity areas. Such sites can be expected to be small and to possess low artifact densities. The active nature of the floodplain in this portion of the project corridor certainly would bury or rework such sites, making their discovery or recovery extremely difficult.

More recent prehistoric or protohistoric cultural sites also may exist on Profit Island. These resources would be similar to those that might exist on the adjacent east bank. The dynamic nature of the island, however, suggests that any resources which may have existed there are likely to have been destroyed by subsequent fluvial activity.

Historic Resources

The potential for historic cultural resources to exist within the project corridor, other than deposits directly associated with 16 EBR 62 and Cain Cemetery, is extremely limited. This is not to say that such resources did not exist; rather, such resources would have been destroyed by the eastward migration of the Mississippi River. At one time, a number of additional structures and a boat landing existed at Mount Pleasant Plantation, in or near the project corridor. All of the resources which were west of 16 EBR 62 were destroyed by the river. No resources located east of the Mount Pleasant Plantation site are within the project corridor under consideration here. As noted previously, at least one lunette (fortification), which represents the early Confederate efforts to fortify Port Hudson, is located east of the project corridor, at a distance of approximately 750 meters landward of the planned construction zone.

Submerged Resources

No submerged resources have been identified within the project corridor. The potential for submerged resources in primary depositional contexts exists only on the upper end of Profit Island. All Mississippi River courses east of the present river channel were abandoned and infilling prior to the advent of the historic period. The bank is actively cutting to the east. This movement would have destroyed any submerged resources which may have existed in this portion of the project corridor. The active nature of Profit Island suggests that any submerged

resources on this feature are in danger of being destroyed through continuous fluvial activities. There is no archival information to suggest that any vessel wrecks occurred in or near the project area, with the exception of the explosion of the <u>U.S.S. Mississippi</u> during the Civil War, on the west bank of the river opposite Port Hudson. Therefore, no impacts to submerged resources have occurred or will occur as result of construction in the Faulkner Lake Revetment project corridor.

Geologic Resources

Known outcrops of possible Pleistocene flora were located at the Mount Pleasant bluff by Brown (1938) and Benton (personal communication, 1986). These outcrops occurred at approximately Range U-78. While none of these fossils are evident at present, analogous deposits were observed north of Port Hudson during the nineteenth century. Since similar materials comprise the bluffs along their entire length, it is possible that fossil flora exist buried beneath those portions of the bluffs which will suffer impacts as a result of revetment construction (i.e., between Ranges U-48 to U-57+50). However, the presence of such deposits is hypothetical, and will not be verified prior to massive earth removal, or a dramatic lowering of the river's elevation.

Recommendations

Because of the inability to delineate any cultural resources within the impact corridor of the Faulkner Lake Revetment project, the discovery of previously unrecorded prehistoric or protohistoric sites would be a fortuitous corollary of bankline grading.

If a fossil bearing outcrop containing tree remains is observed during construction, the following documentation procedures are recommended: photography of exposed fossils, and collection of samples for floral identification and radiocarbon dating. This documentation would have major scientific constance if the fossils are discovered in deposits not intrinated by exposure to the Mississippi River (i.e., buried in master, away from the water's edge).

the proposed undertaking will have no effect the interior lead and Cain Cemetery, no further work is the interior line. In addition, the former site does not the National Register of Historic Places the its apparent lack of integrity and research the interior appear to fulfill Criterion A (36 CFR to its of ircheological and historical research the its no evidence to suggest that intact

cultural deposits exist at 16 EBR 62. It should be noted, however, that no substantive excavation or testing has been conducted at Mount Pleasant Plantation.

Because the status of Cain Cemetery has not been verified through field work, prior to any construction north of the planned limits of the Faulkner Lake Revetment, i.e., Range U-57+50, verification of the status of that property should be undertaken. As the foregoing discussion illustrates, it is likely that Cain Cemetery has been lost to the river.

REFERENCES CITED

- Antevs, Ernst
 - 1948 Climatic Changes and Pre-white Man. <u>University of Utah Bulletin</u> 38:168-191.
- Autin, W.J., A.T. Davison, B.J. Miller, and F.E. Lindfors-Kearns
 1985 Use of Mount Pleasant Bluff in correlation of the
 Prairie formation, southeastern Louisiana. Geological Society of America, Abstracts with Programs.
 17:150.
 - Mount Pleasant Bluff. In Quaternary Geomorphology and Stratigraphy of the Florida Parishes, Louisiana, edited by Joann Mossa and Whitney J. Autin, pp. 25-32.

 South-Central Friends of the Pleistocene Fourth Field Conference Guidebook.
- Bartram Trail Conference
 - 1979 Bartram Heritage: A Study of the Life of William Bartram. The Bartram Trail Conference, Montgomery, Alabama.
- Bartram, William
 - 1791 Travels through North and South Carolina, Georgia, East and West Florida, etc. Philadelphia.
- Bloom, Arthur L.
 - 1971 Glacial Eustatic and Isostatic Controls of Sea Level.
 In The Late Cenozoic Glacial Ages edited by Karl K.
 Turekian. Yale University Press, New York.
- Bouchereau, Louis and Alcee Bouchereau
 - 1868- Statement of the Sugar and Rice Crops Made in Louisiana. Pelican Steam Book and Job Printing, New Orleans.
- Brain, Jeffrey P.
 - 1971 The Lower Mississippi Valley in North American Prehistory. Submitted to the National Park Service, Southeast Region, and to the Arkansas Archeological Survey, Fayetteville, Arkansas.

1

Brown, Clair A.

The Flora of Pleistocene Deposits in Western Florida Parishes, West Feliciana Parish and East Baton Rouge Parish, Louisiana. In Contributions to the Pleistocene history of the Florida Parishes of Louisiana, by H.N. Fisk, M.C. Richards, C.A. Brown and W.C. Stere, pp. 59-96, 121-129. Louisiana Geological Survey Bulletin 12.

Brown, H.O. 1936

1936 Port Hudson: A Study on Historical Geography.
Unpublished Masters thesis, Department of Geography,
Louisiana State University and Agricultural and
Mechanical College, Baton Rouge.

Brunsden, D. and R.H. Kesel
1973 Slope Development on a Mississippi River Bluff in
Historic Time. Journal of Geology. 81:576-597.

Bryant, V.W., C. Assad, S. James, T. Jones, R. Murry, B. Thompson, and D. Carlson

Archeological and Historical Study in the White Castle Gap Revetment, Iberville Parish, Louisiana.

Submitted to the Department of the Army, New Orleans District, Corps of Engineers.

Butzer, Karl W.

1971 Environment Archeology, 2nd edition.
Aldine and Company, Chicago.

Carpenter, W.

1838 Account of the Bituminization of Wood in the Human Era.

<u>American Journal of Science</u>. 36(1):118-124.

Cleland, C.E.

The Prehistoric Animal Ecology of the Upper Great Lakes Region. Anthropological Papers of the Museum of Anthropology, University of Michigan 29.

Collins, Henry B.

Excavations at a Prehistoric Indian Village in Mississippi. Proceedings of the United States National Museum, 79 (32).

Curet, Bernard

1969 Pointe Coupee: Her Place in History. Acadiana Profiles 1(5): 1-9.

- Delcourt, P.A. and H.R. Delcourt

 1977 The Tunica Hills, Louisiana: Late Glacial Locality
 for Spruce and Deciduous Forest Species. Quaternary
 Research 7:218-237.
- Denton, D.H. and W. Karlen 1973 Holocene Climatic Variations - their Pattern and Possible Cause. Quaternary Research 3:155-205.
- Denton, D.H. and S.C. Porter
 1967 Neoglaciation. Scientific American 222:101-109.
- Dreimanis, A.

 1968 Extinction of Mastodons in Eastern North America:
 Testing New Climatic-environmental Hypothesis. The
 Ohio Journal of Science 68(6):257-272.
- Durham, C.O., Jr., C.H. Moore, and B. Parons
 1967 An Agnostic View of the Terraces. In Mississippi
 Alluvial Valley and Terraces. Geological Society of
 America 1967 Annual Meeting Field Trip Guidebook.

 (Part E):22.
- Emery, K.O. and R.L. Edwards
 1966 Archaeological Potential of the Atlantic Continental
 Shelf. American Antiquity 31 (5):733-737.
- Fisk, H.N.

 1944

 Geological Investigation of the Alluvial Valley of the Lower Mississippi River. Prepared for the Mississippi River Commission, U.S. Army Corps of Engineers, Vicksburg, Mississippi.
- Ford, James A. and George I. Quimby, Jr.

 1945 The Tchefuncte Culture, An Early Occupation of the

 Lower Mississippi Valley. Society for American
 Archaeology Memior 2.
- Giardino, Marco J.,
 1984 Historic Vilages in the Mississippi Delta. In
 Perspectives in Gulf Coast Prehistory, edited by Dave
 Davis, pp. 232-257. University of Florida Press,
 Gainesville.

- Gunduz, Orcan
 - 1973 Study of Port Hudson Area with a Plan for Physical Development. Unpublished Master's thesis, Department of Landscape Architecture, Louisiana State University and Agricultural and Mechanical College, Baton Rouge.
- Hilgard, E.W.
 1869 Geology of lower Louisiana. American Journal of Science. 47:77-88.
- Hunt, Charles S.

 1974 Natural Regions of the United States and Canada. W.H.
 Freeman and Company Inc., San Francisco.
- Irwin, Richard B.

 1892 History of the Nineteenth Army Corps.

 G.P. Putnam's Sons, New York.
- Kesel, Richard H. and Robert H. Baumann
 1981 Bluff Erosion of a Mississippi River Meander at Port
 Hudson, Louisiana. Physical Geography 21(1):62-82.
- Kesel, Richard H., K.C. Dunne, R.C. McDonald, K.R. Allison and Pradley E. Spicer
 - 1974 Lateral Erosion and Overbank Deposition of the Mississippi River in Louisiana Caused by 1973 Flooding. Geology 2:460-464.
- King, J.E. and W.H. Allen, Jr
 1977 A Holocene Vegetation Record from the Mississippi
 River Valley, Southeastern Missouri. Quaternary
 Research 8:307-323.
- Lyell, Charles
 1849 A Second Visit to the United States of North America.
 Volume II). John Murray, London.

Maduell, Charles V.J.

1972 <u>Census Tables for the French Colony of Louisiana from 1699 through 1737.</u> Geneological Publishing Co., Inc., Baltimore.

Martin, Paul S. and H.E. Wright

1967 Pleistocene Extinctions: The Search for a Cause. Yale University Press, New Haven.

Martin, Paul S., John B. Rinaldo and William A. Longacre
1961 Mineral Creek Site and Hooper Ranch Pueblo, Eastern
Arizona. <u>Fieldiana: Anthropology</u>, Vol. 52. Chicago.

Meyer, J. Ben, Sr.

1968 A Brief Sketch of the Life of Judah P. Benjamin (1811-1884). Prepared for the Plaquemines Parish Commission Council (in vertical files, Louisiana Collection, Howard Tilton Memorial Library, Tulane University).

Meyers, Rose

1975 A History of Baton Rouge 1699-1812. Louisiana State University Press, Baton Rouge.

Neuman, Robert

1984 An Introduction to Louisiana Prehistory. Louisiana State University Press, Baton Rouge.

Petersen, Mary A.

1971 British West Florida: Abstracts of Land Petitions.
Louisiana Genealogical Register 18: 318-337.

Phillips, Philip

1970 Archeological Survey of the Lower Yazoo Basin, 1949-1955. Paper of the Peabody Museum of Archaeology and Ethnology. Harvard University, Volume 60, Cambridge, Massachusetts.

Pittman, Philip

1906 The Present State of the European Settlements on the Mississippi. A.H. Clark, Cleveland.

- Poplin, Eric C., Donald L. Bascle, Jill-Karen Yakubik, and Ana Chandler
 - Cultural Resources Sample Survey of the Bayou Cocodrie and Tributaries Project, St. Landry, Evangeline and Avoyelles Parishes, Louisiana. Draft report submitted to the U.S. Army Corps of Engineers, New Orleans District.
- Raphael, Morris
 1975 The Battle in the Bayou Country.
 Harlo Press, Michigan.
- Samuel, Ray, Leonard U. Huber and Warren Ogden
 1955 When the Mississippi Ran Red. In <u>Tales of the</u>
 Mississippi, pp. 124-125. Hastings House, New York.
- Saucier, Roger T.

 1974 quaternary <u>Geology of the Lower Mississippi Valley</u>.

 Research Series No. 6. Publications on Archeology,

 Arkansas Archeological Survey, Fayetteville.
 - 1977 Sand Dunes and Related Eolian Features of the Lower Mississippi Alluvial Valley. Manuscript available from the U.S. Army Corps of Enginee. Waterways Experiment Station, Vicksburg, Mississippi.
- Shafer, Judy, Louis Torres and Diane Rhodes

 1984

 An Archeological Survey of the Proposed Faulkner Lake

 Revetment and Project (M-255 to 251-L0, East Baton

 Rouge Parish, Louisiana. Report submitted to the U.S.

 Army Corps of Engineers, New Orleans District.
- Shenkel, J.R.
 1981 Pontchartrain Tchefuncte Site Differentiation.
 Louisiana Archeology No. 8. Lafayette, Louisiana.
 - Early Woodland in Coastal Louisiana. In Perspectives on Gulf Coast Prehistory, edited by Dave Davis, pp. 41-71, University of Florida Press, Gainesville.
- Smith, Steven D.
 1986 Salvage Excavations at 16 EBR 64. Unpublished report
 on file at the Louisiana Division of Archaeology, Baton
 Rouge.

- Stoltman, James B.
 - 1978 Temporal Models in Prehistory: An Example from Eastern North America. Current Anthropology 19(4):703-729.
- Symonds, Craig L.
 - 1983 A Battlefield Atlas of the Civil War. The Nautical and Aviation Publishing Company of America, Baltimore.
- Toth, Alan
 - Archeology and Ceramics at the Marksville Site.
 Anthropological Papers of the Museum of Anthropology,
 University of Michigan, Number 56.
 - 1977 Early Marksville Phases in the Lower Mississippi Valley: a Study of Culture Contact Dynamics.
 Unpublished doctoral dissertation, Department of Anthropology, Harvard University, Cambridge.
- Turnbaugh, W.A.
 - 1975 Toward an Explanation of Broadpoint Dispersal in Eastern North American Prehistory. <u>Journal of Anthropological Research</u> 5:51-68.
- U.S. Department of Agriculture
 - 1968 <u>Soil Survey of East Baton Rouge Parish, Louisiana.</u> Washington, D.C.
- Webb, Clarence H.
 - 1968 The Extent and Content of Poverty Point Culture.
 American Antiquity, 33(3):297-321. Salt Lake City.
- Weinstein, Richard A. and David B. Kelly
 - Archeology and Paleogeography of the Upper Felsenthal Region. Prepared for the U.S. Army Corps of Engineers, Vicksburg District.
- Whitehead, Donald R.
 - 1965 Prehistoric Maize in Southeastern Virginia. Science 150:881-882.
- Wright, H.E., Jr.
 - 1974 The Environment of Early Man in the Great Lakes Region. In Aspects of Upper Great Lakes Anthropology edited by Elden Johnson. Minnescta Prelistoric Archaeology Series 11:3-14.

Archival Sources

Charles L. Matthews and Family Papers, Hill Memorial Library, Louisiana State University and Agricultural and Mechanical College.

East Baton Rouge Parish Archives

INDEX

λ	
Ackens, Thomas	29, 34, 36
Alluvial bottomlands	58
floodplain	9, 18, 58,
	61, 62
materials	
materials, Holocene	11, 14, 18
Alto (Louisiana)	19
Amoco Corporation	32, 33
Amoco Corporation	3
В	
Ball's Bluff	
	31
Banks, General Nathaniel P.	47, 49
Bartram, William	9, 10, 29, 14,
	35
Bartram Trail Conference	29
Bates, William P.	43
Baton Rouge	9, 28, 29,
•	41, 46, 63
Bayou Sara	18
Bayou Sara Road	53
Benjamin, Judah P.	38, 62, 63
Benton, Fred	
de Bienville, Jean Baptiste Lemoyne	14, 18
Poll woowil Maying	28
Boll weevil, Mexican	32
British Colonial period	34
Brown, Clair	14
Edward Eagle	4 4
Browne, Governor Montfort	29
Buhler, John	36
Butler, General Benjamin	46
C	
Cain Cemetery	44-45, 57, 63
	65
Carpenter, W.	14, 18
Carrollton Gauge	18
Civil War	10, 29, 32, 41,
	46-57, 62, 63
activities during	64
period	8
	41
ramparts	7
Clay (at Mount Pleasant Bluff)	40

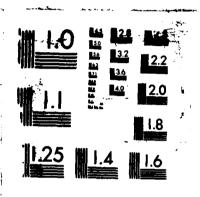
```
Confederate States of America
                                                 40, 62
                                                  47, 49, 53
    batteries
                                                  41, 46, 47, 49,
    Confederate(s)
                                                  53
    cavalry unit ("Plains Rangers", 1 LA Cav) 29, 46
                                                  53
             local
    defenses, fortifications
    forces
                                                  46, 47
                                                  41, 46, 47, 53
    fortifications (earthworks)
                                                  64
    fortress
                                                  49
                                                  49, 53
    garrison
    lines, positions
                                                  47, 49
                                                  47, 64
    lunettes
 Corn
                                                  35
 Cosby, Alexander
                                                  36
                                                  36
        Buhler
                                                  36
        Thomas Lilly
        Thomas Stannard
                                                  36
                                                 33, 35, 40
Cotton
                                                 9, 11
Cross-section, geologic
Dartaguette, Bernard Dirot
                                                 28
 Delcourt, Paul A. and/or Hazel R.
                                                  11, 14, 18, 19
 Direct historical approach
                                                  63
Donaldsonville
                                                  35
E
 East Baton Rouge Parish
                                                  9, 29, 35, 43
 East Feliciana Parish
                                                  27
 English settlers
                                                  28, 34
 Erosion (eroded, eroding, etc.)
                                                  1, 7, 9, 13, 14,
                                                  21, 57, 63
 False River
                                                  22
 Fancy Point Towhead
                                                  18
 Farragut, Admiral David
                                                  41, 46, 47, 49
35, 37, 38, 40,
 Faulkner, John C.
                                                  45
            John C. , Jr.
                                                  35, 37
           Samuel
                                                  35, 37, 38, 40
           William F.
                                                  35, 37, 38
 Faulkner Lake
                                                  7, 9, 11, 28
                                                  19, 41, 47, 58
                                                  1, 3, 4, 7, 9,
11, 18, 21, 28,
 Faulkner Lake Revetment Project
                                                  33, 46, 56, 57,
                                                  58, 61, 62, 63,
                                                  64, 65
```

```
Federal, or Union
                                               49
   artillery
                                               33, 49, 53
   battery
                                               53
   Black regiments
                                               33, 57, 63
                                               46
   engineering units
                                               41, 47, 49
   fleet
                                               49, 57
   flotilla
                                               29, 33, 41, 46
   forces
                                               53
                                               46, 49
   gunboats
                                               49
   infantry
   mortar boats
                                               49
                                               47, 49
   naval bombardment of Port Hudson
                                               49
   Nineteenth Army Corps
                                               41, 53
   occupation forces
                                               33, 47, 53, 63
   siege positions
                                               1, 3, 4, 8, 58,
Field investigations/work, previous
                                               65
   Shafer et al. (1984)
                                               3, 4, 7, 8, 33,
                                               61, 63
                                               3, 4
   transect(s), interval
                                                4, 8, 21
   underwater
                                               19
Fisk, H. N.
                                               44
Fitzhugh, H. A.
                                               35, 37, 38
nee Flower, Eliza (Faulkner)
                                               10
Forests
Fossil(s)
                                               11, 14, 18, 64
   bearing deposits
                                               14, 18, 64
   bearing outcrops (includes floral)
   driftwood (as fossil flora)
                                                18
   flora(1) materials/remains
                                                11, 18, 64
      Cottonwood (Populus deltoides)
                                               10
      Cypress (Taxodium distichum)
                                               10, 18
      Tupelo gum (Nyassa aquatica)
                                               18
      Swamp hickory (Carya aquatica)
                                                18
      Sweetgum (Liquidamber styraciflua)
                                                10, 18
      Water oak (Quercus nigra)
                                               10, 18
   Pleistocene bed, deposits, flora
                                                7, 64
   stumps/timbers/trees
                                                11, 14, 18
Foster Creek site (16 EF 16)
                                                28
French Colonial Period
                                                28, 34
                                                47, 49
Gardner, General Frank
Gec'agic/geomorphic process
   aeolian activities, deposition
                                                11, 13
                                                14, 21, 61, 63
   bank failure, slumping
   fluvial activity
                                                61, 64
                                                11, 13
           deposits
```

Georgia Pacific Company Grant, General U. S. Grassy Lake Great Britain Gulf Investment Corporation	33 46 19 34, 35 44
H Hampton (Thorpe), Eliza Flower Henry Lake Hilgard, E. W. Historic map(s) Holmes, Robert and Louis Holocene Horseshoe Lake Houma Indians Hyce, James A.	35, 37, 38 19 14 3, 8, 19, 61 43 10 19 27 43
I d'Iberville, Pierre Lemoyne, Sieur Indigo Intermediate Terraces	27 29 13
J Jackson (Mississippi) Johnstone, Governor George Jones Lake Jonesville (Louisiana)	41 29 19 26
K	
Kiln, brick King Lumber Industries	40 44
L Lake Solitude (Faulkner Lake) Land use de La Salle, Robert Cavelier, Sieur Loess Louisiana	42, 47 7, 8, 32, 44 27 13
Louisiana Rural Folklife Museum Lumber industry sawmills Lunette Lyell, Charles	4 · · · · · · · · · · · · · · · · · · ·

AD-A182 492 CULTURAL RESOURCES ASSESSMENT OF THE FAULKNER LAKE 2/2
REVERMENT EAST BATON R. (U) GOODWIN (R CHRISTOPHER) AND ASSOCIATES INC. NEW ORLEANDS LA E C POPIN EST OF THE FOLLOWING COLUMN PD-87/01 DACH29-85-D-0113 F/G 5/6 NL

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MICROCOPY RESOLUTION TEST CHART MATIONAL BUREAU OF STANDARDS-1963-A

enar engaluarly

```
26, 28
Maize
                                                29, 35
Marks, John
                                                34
Marquis de Mezieres
                                                43
Maryman, William A.
                                                37
Matthews, Judge George
                                                37, 38
          Harriet
                                                29, 34, 35, 37
          Israel
                                                46
Memphis (Tennessee)
                                                1, 4, 9, 10, 11
13, 14, 27, 29,
Mississippi River
                                                34, 37, 41, 46,
                                                49, 64, 65
   abandoned, relict channel(s), deposits
                                                7, 10, 13, 19,
                                                21
             course(s)
                                                1, 9, 47
   channel(s)
                                                1, 9
   east bank (left descending)
   low water reference plane (line)
                                                1, 3
   Lower Mississippi River Valley
                                                23, 26
                                                10, 11
   meander belt(s)
                                                27
   Middle Mississippi River Valley
   Pleistocene Mississippi River
                                                11
                                                19
   rates of migration
   west bank (right descending)
                                                28, 57, 64
                                                43, 44
Mississippi River Commission
                                                53
Mobile Ridge
                                                4, 9, 10, 11,
Mount Pleasant
                                                14, 18, 19, 35
                                                53, 57, 58
Mount Pleasant Plantation (16 EBR 62)
                                                4, 7, 8, 33, 34,
                                                35, 37, 38, 40,
                                                41, 43, 44, 45,
                                                57, 58, 61, 62,
                                                63, 64
   Artifacts (at 16 EBR 62)
   landing
                                                41, 53, 62
   military structures at
                                                61-63
   significance of
Muskhogee
                                                27
                                                35, 36
Nash, Da Sibil
Natchezan, see also 16 EF 52
                                                28
National Park Service, Denver Service Center 3, 61
National Register of Historic Places
                                                58, 62, 65
   criteria for eligibility
   eligible properties
                                                58
Natural levee(s), deposits
                                                7, 13
                                                1, 3, 4, 8, 13,
New Orleans (Louisiana)
                                                32, 40, 41, 43,
                                                44, 46, 57, 65
                                                44
New Orleans Cattle Loan Company
```

```
Oil/Natural gas exploration and recovery
                                               33, 44
                                                38
Overseer
Oxbow(s) lakes, cut-offs
                                                7, 9, 11, 19,
                                                58
                                                49
Palmer, Commodore
                                                55
Parrot gun
                                                28
Pears Site (16 EF 52)
Pennington, C. B. "Doc"
                                                44
"les Petite Ecores" (The Little Cliffs)
                                                34
                                                28
Pittman, Philip
Plains, The (St. John's)
                                                27, 28, 34
Plaquemines Parish
                                                38
                                                2, 5, 59, 60
Point Menoir
Pointe Coupee
                                                28
Port Hickey
                                                32, 34
Port Hickey Plantation
                                                43
Port Hudson
                                                1, 14, 18, 29,
                                                32, 33, 34, 40,
                                                41, 46, 47, 49,
53, 57, 63, 64
   assaults (Federal) on
                                                47
                                                46, 47, 49
   fortifications (Confederate)
                                                53
   siege of (Civil War)
   State Commerative Area
                                                33
Port Jackson
                                                29
Prairie(s) (around Port Hudson)
                                                28, 47
Proffit, George
                                                35
Profit Island Chute (Closure Project)
                                                1, 3, 4, 9, 11,
                                                21, 34, 53, 57,
                                                61, 64
Quaternary deposits
                                                10, 11, 18
   terraces
                                                11
Quaternary Prairie Terrace
                                                10, 11
Radiocarbon assay, date, dating
                                                18, 65
Railroads
                                                41
Red Lake
                                                19
Red River
                                                10, 27, 41, 46,
                                                62
Remote sensing, underwater
                                                4
   instrument readings
   magnetometer (underwater)
                                                4, 57
                                                4, 57
   side scan sonar
Research objectives
```

Rice River (Mount Pleasant) Road	28, 43 53	
Robards, Francis	33 37	
Russ, Samuel P.	43	
Russ, Samuel P.	43	
S		
Sandy Creek	47	
Sangamonian Interglacial Period	10, 11	
Saucier, Roger	10, 11	, 23
Sheriff's sale (of Mount Pleasant)	40	
Silvaculture	44	
16 EBR 15	27, 58	, 61
16 EBR 62 (see Mount Pleasant Plantation)		
16 EBR 64 (see also Troth's House)	33, 53	
16 EF 16 (see Foster Creek Site)	28	
16 EF 52 (see also Pears Site)	28	
Slave(s), labor	-	, 40, 47
Smith, Jay C.	43	
Samuel H.	43, 75	
Snowden, James S.	43	
Rilda	43	
Soil(s)	10, 11	, 13
Solitude tract	37	
Spain	29, 35	
Spanish Colonial period	35	
Sparks, William H.	38, 40	
Springfield Landing	53	
Steamboats	40	
Stirling, Mary Cobb	40, 41	
Stumpy Lake	19	
Sugar cane	29, 32	, 40
T		
Texas	46	
Thompson's Creek	11, 28	
Tonti, Enrique	27	
Troth's House (16 EBR 64)	33, 53	
Union Battery 20 (at Port Hudson)	53	
Tunica Indians	27	
Tuscaloosa Trend	33, 44	

σ		
Union (see Federal)		
U.S.S. Albatross	47, 49	
Arizona	49	
Essex	47, 49	
Estrella	49	
Genessee	47, 49	
Hartford	47, 49	
Kineo	47	
Mississippi	47, 49,	57, 64
Monongahela	47, 49	•
Richmond	47, 49	
Sachem	47, 49	
V Vicksburg (Mississippi)	41, 46,	49
• • • •	,,	• •
W West Carroll Parish West Florida (Parishes) Wisconsinan Glacial Period	24 28, 29, 13	34, 35

X, Y, Z